

BUSINESS WEEK

← WEEK AGO

← YEAR AGO

← START OF WAR 1939



Election eve—and Hershey and McNutt prepare to take the biggest issue of all to Congress: manpower for Army and industry.

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218 AMERICAN BOMBERS DESTROYED BY AMERICANS

In the first seven months of this year of war, with our country in peril of its life, 8740 man YEARS of work have been lost—vital time that could have been saved by true patriotism, by devotion to country first instead of self.

In 8740 man years of work, 218 big bombers could have been built, or 3 cruisers, or 497,000 modern rifles—bombers, cruisers, rifles that could have saved American lives and ended the war sooner.

Our enemies believe they will conquer us as they have conquered others and for the same reason—because we are greedy and lazy, because we will not cooperate with each other. Those 218 bombers that will never fly look as though our enemies were right about us.

Won't *you* pledge, as many true Americans have, to forget differences, hatreds, suspicions—and work your hardest and best for America until this war is won? If you do, a free America will know how to reward those who have kept it free; if you do not, you will be working for Jap-German-Italian masters who will laugh to scorn the rights you are "protecting" at the peril of your country and of your family's future.



YOU CAN TURN IT BETTER, FASTER, FOR LESS... WITH A WARNER & SWASEY

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It chews a pasture into an airport

A typical example of B. F. Goodrich development in rubber

Cows don't mind bumps in their parking lot—but airplanes do. Here's the machine that fixes those bumps. As it moves across rough ground, sharp discs chew up sod, roots, rocks, dirt—and drop it all onto a rubber belt to be carried up and dumped in trucks.

But the belt had to be so thick and heavy it could handle 14 tons of dirt in one minute, and in order to get it down close to the ground it had to make a sharp turn around a small-diameter pulley. The strain was so great that belts costing several hun-

dred dollars were being worn out in two or three weeks. (And each belt took 250 pounds of rubber.)

At one airport the B. F. Goodrich distributor was called in. He saw the trouble always started where fasteners joined the belt ends together. How about an endless belt? The contractor was sure the seam in the splice would open up as it went around that narrow pulley, also that work would be delayed waiting for the spliced belt to come from the factory.

But B. F. Goodrich men had developed a kind of splice in which the

only important seams are buried under a vulcanized rubber cover—and most B. F. Goodrich distributors have portable electric vulcanizers and can splice the belts right on the job and in a few hours. So a stock belt was made endless on this big grading machine; it was on the job next day, lasted 42 weeks, more than twenty times as long as the first belt. Rubber was saved and airport construction was speeded up. *The B. F. Goodrich Company, Industrial Products Division, Akron, Ohio.*

B. F. Goodrich

FIRST IN RUBBER

Dear Mr. President.



Sophisticated folks may laugh when they hear of plain, ordinary citizens telling their troubles to their President.

Weil, the plain folks are apt to be more right than the ones who laugh. For the plain folks instinctively know that the *only* business of a democratic government is its people. Write to the President? Doesn't it say in the Bill of Rights that Congress hadn't better monkey with the people's right "to petition the Government for a redress of wrongs"? Mister, it surely does!

Because dictators are trying to make a scrap of paper of the Bill of Rights, and put a bayonet through every other democratic idea, SKF workers are working as never before in SKF history.

For their anti-friction bearings are also anti-Axis!



SKF
BALL AND ROLLER
BEARINGS

SKF INDUSTRIES, INC., PHILA., PA.

BUSINESS WEEK and The ANNALIST

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Business Week • October 31, 1942

WASHINGTON BULLETIN

WHAT THE WASHINGTON NEWS MEANS TO MANAGEMENT

No Election Worries

Election day holds no fears for Roosevelt. The Old Master hasn't lost his touch, when it comes to politics. He has timed his domestic war measures to give him the greatest strength at the polls. Those voters who have been demanding aggressive action are satisfied. They see stabilization of wages and prices; rationing of gasoline, meat, and coffee; drafting of 18-19 year olds; and control over manpower, already in the works.

But not one of these measures will be in full effect Tuesday. None of them has hurt anybody yet or made anybody very mad. With two cups of coffee and a rasher of bacon under his belt, the patriotic voter will drive to the polls.

Consequently, most voters who have no stomach for war sacrifices won't mark their ballots in a vengeful mood. They haven't yet been compelled to face Roosevelt's really tough measures as daily realities. They remain only headlines.

So the outcome of the elections will not add up to any rebuke to the President or hand him a Congress much harder to deal with than the one he's got now. The White House expects that the Republicans will make some gains, but F. D. R. will still have majorities in both Houses.

Of course, a debacle in the Solomons, if it were announced before Election Day, might upset calculations.

The Draft and Farm Labor

Draft deferment of dairy, livestock, and poultry farmers by administrative action comes now in order to head off the Senate amendment to the boys' draft bill which would exempt all farmers from conscription. This is the one thing the Administration doesn't want.

It has no desire to protect farming generally from manpower depletion, wants to use nonessential and subsistence farms as reservoirs of labor (page 15). Draft deferment will be used to induce men to move from such farms to commercial farms with essential crops or into war industry. Protein-producing farms which are barely above the subsistence level will be put on a commercial basis by Department of Agriculture help in getting up to the 12-cow minimum necessary for draft deferment.

Wage-Hour Amendment

Talk of amending the wage-hour law as a contribution to easing labor shortages is coming now from people, like Congressman Ramspeck, who stand well

with the Administration rather than from those who have been beating this drum consistently and who have consequently been accused of labor-baiting. But don't jump to the conclusion that premium rates for overtime work will be waived until 44, 48, 56, or some other specified number of hours is reached.

Eventually, it's a slight possibility. But organized labor still packs a terrific political wallop whenever it can unite on an issue, as it would on this one. And the Administration won't go all the way. It doesn't carry its anti-inflationary sentiment to the point of interfering with production, as a pay cut in the war plants now paying overtime undoubtedly would.

WPB Quarrel Now "Secret"

A gag rule, it is optimistically hoped, has been slapped down on WPB officials charged with drafting the system of material control which is to replace the Production Requirements Plan in the second quarter of 1943.

Reverberations from the battle between Pittsburgh's Steel Quota Plan and Detroit's Material Scheduling Plan (BW—Oct.24'42,p7) have been so disturbing to industry, have evoked so many frantic phone calls to Washington, that WPB Vice Chairman Eberstadt has ordered his men to say nothing to anyone. Copies of the compromise scheme definitively labeled "Materials Control Plan" are numbered, accounted for, and stamped SECRET in big red letters. (This is the most fearsome of the "Restricted," "Confidential," "Secret" hierarchy.)

● **A Matter of Fact**—The secret will be kept; the document will never see the light in its present form; there are too many days between now and the intended official announcement, the second week in November.

Disciplining the Army

Critics who have seen disturbing evidence of military control over industry in the rise of Ferdinand Eberstadt, former Munitions Board chairman, to a dominant position in WPB were comforted by last week's order requiring WPB clearance of all plant construction (page 19).

This policy is Eberstadt's baby. It is one of the toughest moves WPB has yet taken to discipline the Army, and it involves the crucial dispute over the scale of the munitions program.

Before Pearl Harbor, Nelson and his friends in the old Office of Production

Management had to needle the Army into raising production sights to near-war levels. Since the shooting started, however, WPB has been trying to induce the generals, in laying out new plant, to be less starry-eyed about how far the country's material and human resources will stretch.

New Transportation Division

WPB is going to get a firmer hold on the domestic transportation problem. Until now, the main task (handled by the Office of Defense Transportation) has been conserving equipment, filling cars to the brim, knocking out frills. But with the necessity for priorities just around the corner, WPB wants to take over the job of brain-trusting, leaving ODT to do the order-writing and police work.

To cope with the situation, WPB is giving domestic transportation the status of a regular industry branch. This is being done by amalgamating the old Transportation Committee—an advisory group with twilight authority—and the Stockpile and Shipping Imports Branch. The new creation is labeled Division of Stockpiling and Transportation, will be headed by W. Y. Elliott, former Imports Branch chief.

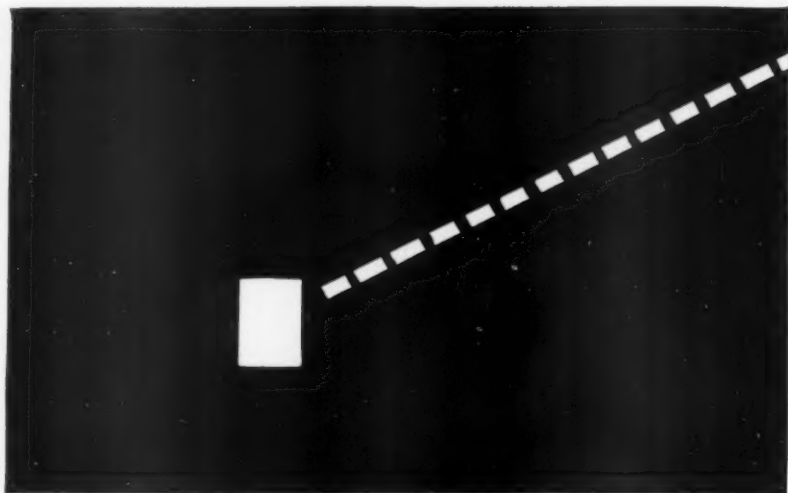
● **Nothing Drastic Yet**—Although domestic shipping priorities (and to a lesser extent, warehousing) will get increasing attention, don't expect any drastic overall orders in the near future. WPB still adheres to the belief that the rails can fend off general congestion, and that priorities will come only commodity by commodity.

Warehouse Requisitioning

The Office of Defense Transportation has quietly broken the news: Warehouse space is to be requisitioned. Samuel G. Spear, assistant director of ODT's Storage Division, dropped the hint when he told Missouri warehousemen they "may be asked to lease portions or possibly entire buildings to the government for the duration."

Public warehouses are currently occupied to 84% of capacity. The remaining 16% may be next to useless to the government because of out-of-the-way locations. Warehouse pools (BW—Apr.25'42,p55), established with ODT's blessing in 14 cities, have been a help, but the pools can't conjure up nonexistent space.

● **Cautious**—Though convinced that requisitioning is the only answer, ODT has decided on a cautious policy, especi-



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A Diagram for Wartime Precaution

This diagram is for open-minded management—men who are willing to consider a new protective method already adopted as standard practice by executive management of such companies as INGERSOLL-RAND, SKF INDUSTRIES, ANACONDA, FALK CORPORATION, BALDWIN LOCOMOTIVE and scores of other leaders.

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To Presidents

- and all executives responsible for preservation of business in these perilous times -

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ally with public announcements. Reason: Before taking the final step, ODT undoubtedly wants to ring in WPB's new Division of Stockpiling and Transportation, thus make the move doubly official.

Arnold Takes a Beating

Last week Thurman Arnold took the worst licking since he's been in office.

First, his proposed super-duper suit against the railroads, airlines, and motor carriers (BW-Jul.25'42,p17) had the props knocked from under it when WPB forced Arnold to lay off.

Next, the Secretaries of War and Navy certified that the antitrust action against American Optical, Bausch & Lomb, and the Optical Wholesalers National Assn. (BW-Mar.29'41,p28) was impeding the war effort. So that, too, went into the ashcan.

Coming on the heels of Arnold's failure to get an injunction against the American Federation of Musicians because of their ban on transcriptions, these disappointments pushed the Assistant Attorney General's wartime fortunes to a new low. Only two avenues are now open to him: (1) He can still mildly pursue the common carriers by teaming up with OPA in protesting petitions for rate increases, and (2) he can shunt his trust-busting into nonwar industries.

Arnold will probably ride down both avenues at once, fanfaring his entrance into Avenue No. 2 with the suit against A & P, world's biggest food chain, on which grand jury proceedings are now under way in Dallas.

No Extra Gas for Salesmen

The shadowy line that has existed between "salesmen" and "service men" under gasoline rationing in the East now has been sharply defined.

After Nov. 22, when nationwide rationing goes into effect, all types of salesmen are eliminated from the "preferred mileage" class, which means they won't get "C" cards. Maintenance and repair men will get "C" rations only if they prove that "transportation is not sought for purposes of selling, merchandising, or promoting." Executives, technicians, office workers, etc., whose travel between public utilities, industrial, and similar establishments "essential to the war effort" is "necessary to their functioning or operation" will be issued "C" cards.

New regulations, based on three month's experience in the East, will give local boards throughout the country more definite standards by which to issue—or deny—preferred mileage cards.

Back Seat for Morgenthau?

Administration officials who think Morgenthau's fiscal program to combat inflation has always been "too little and too late" are hinting that Stabilization Director Byrnes should replace the Treasury head as the Administration's spokesman on tax and compulsory savings questions.

Morgenthau's failure to foresee the magnitude of fiscal and inflationary problems has completely discredited him with members of the Senate and House taxing committees, including Administration stalwarts. His repeated state-

ment that the Treasury operates on a 24-hour policy and his constant changes in tax proposals are scored as inappropriate to wartime conditions.

Extend Big Pipeline

Chalk up another score for Petroleum Coordinator Ickes and petroleum consumers of the East. WPB approved continuance of the 24-inch pipeline from Illinois to the East Coast. With work already well along on the "Big Inch" from Longview, Tex., to Norris City, Ill., the new authorization will bring the tube from the latter terminus to

Byrnes Order Fixes Salary Freeze

The fog of uncertainty surrounding salary adjustments which set in after President Roosevelt's Executive Order of Oct. 3, providing for stabilization of the national economy, was partly dispelled this week by regulations issued by Economic Stabilization Director James F. Byrnes.

One fundamental point emerged clearly: The average employer, anxious to observe the letter and the spirit of the regulations, would have to begin by assuming that all wages and salaries are fast frozen. To be sure, there are provisions made for some changes; but those that are permissible are subject to precise and exacting conditions. A sound operating policy—overcautious perhaps but safest until further regulations, interpretations, and rulings are handed down—would provide that all payroll alterations be deferred until they are O.K.'d on the record by either the National War Labor Board or the Commissioner of Internal Revenue in the Treasury Department.

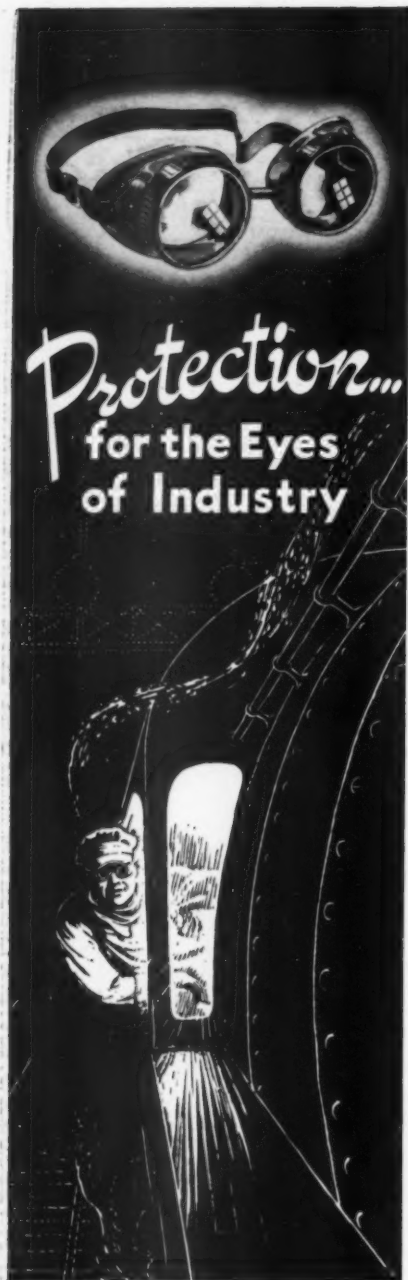
• **Division of Authority**—Adjustments of wages—hourly, daily, or piece work rates—and of salaries under \$5,000 a year (provided they do not go to "bona fide" executive, administrative, or professional personnel) are subject to the authority of NWLB (page 82). That agency also has jurisdiction over all salary payments up to \$5,000 a year where the employee involved is represented by a recognized labor organization. The Commissioner of Internal Revenue has authority over all other salaries and is charged with responsibility for limiting individual salary income to \$25,000 a year net after taxes and fixed obligations, insurance, and charitable payments.

Punitive powers to enforce the pay freeze are provided by Congress in the anti-inflation act, which was signed by the President Oct. 2. A fine of \$1,000 and a year's imprisonment, or both, is the statutory penalty for violations. In addition, under authority from Congress and the Executive, Byrnes has instructed the Treasury, OPA, and contracting agencies of the federal government that "any salary payments made in contravention of the act, or any regulations or rulings promulgated thereunder" shall be disallowed by all agencies and departments determining an employer's costs and expenses, or "for the purpose of calculating deductions under the revenue laws."

• **Specified Exceptions**—"Contravention of the act" is explicitly defined in the Byrnes regulations to mean increasing salaries of less than \$5,000 a year after Oct. 27, 1942, or increasing salaries of more than \$5,000 after Oct. 3, 1942, except where, in accord with a "salary agreement or salary rate schedule," increases are the direct result of:

- (1) Individual promotions or reclassifications,
- (2) Individual merit increases within established salary rate ranges,
- (3) Operation of an established plan of salary increases based on length of service,
- (4) Increased productivity under incentive plans,
- (5) Operation of a trainee system.

To be legal, all other salary adjustments—either upward or downward—must be sanctioned by NWLB, the Bureau of Internal Revenue, or subsequent orders and regulations issued by the Office of Economic Stabilization.



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Phoenixville, Pa., split it there, and run smaller branches to the New York harbor and Philadelphia refining areas.

Run at maximum capacity, the new pipeline will pour 300,000 barrels a day from east Texas into eastern refineries.

Office of Petroleum Coordination officials, who expect the first segment (550 miles) of line to be completed by mid-December, say crews will immediately move to the eastern section and begin work in an effort to get the entire project finished by next June. The newly authorized 857-mile section (which has been pending before WPB more than three months and been turned down previously) will use from 210,000 to 220,000 tons of steel.

Labor-Management Front

Signs of union-management accord on wartime labor problems have lately heartened many a business man who keeps in close touch with Washington developments.

Moved by the realization that coercion and control cuts both ways, union and management representatives who are members of various war agency advisory committees and policy boards have been drawing together to stand off encroachments on their freedom that they believe to be politically motivated and spuriously offered under the guise of necessary wartime measures.

• **Manpower Entente**—Such an entente has been the reaction to Manpower Chief Paul McNutt's proposals for a national service act which would provide stringent regulation of the labor market.

Management men understand that any law that empowered a federal official to move a machinist from a textile mill to a chemical plant would also grant authority for moving a vice president in charge of manufacturing from Long Island to Los Angeles. Neither unions nor management is convinced such drastic steps are necessary yet, and although they may disagree on details, they have presented a united front in opposition.

Their success in staving off such a move, at least temporarily, has led them to explore other possibilities for common ground.

Aliens for War Work

Federal authorities expect growing shortages of manpower to accomplish what persuasion has thus far failed to do—break down the barriers to employment of aliens in war factories. They point out that the 4,000,000 to 5,000,000 foreign born who have not yet completed their naturalization proceedings

are a most important addition to the country's labor potential.

How many aliens are now in war industries is not known, but letters concerning discrimination against them still reach the War Manpower Commission at the rate of nearly 150 a week.

Most of the discrimination arises out of prejudice, or misunderstanding of the law by employers.

• **The Rules**—Employment of aliens is restricted only on aircraft contracts, or on those specified as confidential, and the procurement agencies have authority to permit employment of aliens even on these types of contract. War and Navy Departments have granted such approval in 99% of the cases where permission to employ aliens was asked.

Radio Follows the Flag

U. S. troops in England don't see much fun in the British Broadcasting Company style of radio entertainment, and arrangements are now being worked out to send American entertainers on tours of the camps in the British Isles. The scheme was inspired by the success of trips made by Al Jolson, Edgar Bergen, and Bob Hope to outlying bases.

A BBC man is now in this country setting up plans by which programs will be picked up by BBC and shortwaved to this country to fill their regular network spots. Show sponsors are expected to pay the cost of the tours, with the military providing transportation.

Capital Gains (and Losses)

The Commerce Department, in its official Survey of Current Business, prints an article setting forth that, when the war ends, money which would normally be released with the immediate cashing of many war bonds must be "immobilized" until an adequate supply of consumer goods is available.

OPA is on the trail of several lawyers who are trying to trump up business by filing complaints against OPA orders in the names of companies they don't represent. They may be barred from practice before OPA.

A disgruntled New Dealer remarked the other day that we might still win the war if the Germans have as much red tape as we do.

The Army is now requiring its war contractors to comply fully with local blackouts, "even though this means a temporary cessation of production," until they have demonstrated they can douse the lights and dump the furnaces successfully. After that, the rules will be relaxed.

—Business Week's Washington Bureau

FIGURES OF THE WEEK

	§ Latest Week	Preceding Week	Month Ago	6 Months Ago	Year Ago
THE INDEX (see chart below)	*188.0	†187.4	186.3	176.6	161.0
PRODUCTION					
Steel Ingot Operations (% of capacity)	101.1	101.0	97.3	98.9	99.9
Production of Automobiles and Trucks	20,825	20,225	20,860	21,900	91,855
Engineering Const. Awards (Eng. News-Rec. 4-week daily av. in thousands)	\$20,361	\$24,529	\$28,450	\$32,982	\$12,810
Electric Power Output (million kilowatt-hours)	3,753	3,717	3,720	3,273	3,341
Crude Oil (daily average, 1,000 bbls.)	3,917	3,902	3,909	3,581	4,099
Bituminous Coal (daily average, 1,000 tons)	1,900	†1,910	1,912	1,919	1,897
TRADE					
Miscellaneous and L.C.L. Carloadings (daily average, 1,000 cars)	87	88	85	85	94
All Other Carloadings (daily average, 1,000 cars)	63	64	65	56	59
Money in Circulation (Wednesday series, millions)	\$13,995	\$13,932	\$13,519	\$11,642	\$10,278
Department Store Sales (change from same week of preceding year)	+16%	†+26%	+5%	+15%	+6%
Business Failures (Dun & Bradstreet, number)	145	132	149	233	178
PRICES (Average for the week)					
Spot Commodity Index (Moody's, Dec. 31, 1931 = 100)	233.0	233.4	235.0	231.3	208.3
Industrial Raw Materials (U. S. Bureau of Labor Statistics, Aug., 1939 = 100)	155.6	155.6	155.0	153.6	144.7
Domestic Farm Products (U. S. Bureau of Labor Statistics, Aug., 1939 = 100)	185.2	185.5	186.3	184.8	156.5
Finished Steel Composite (Steel, ton)	\$56.73	\$56.73	\$56.73	\$56.73	\$56.73
Scrap Steel Composite (Iron Age, ton)	\$19.17	\$19.17	\$19.17	\$19.17	\$19.17
Copper (electrolytic, Connecticut Valley, lb.)	12.000¢	12.000¢	12.000¢	12.000¢	12.000¢
Wheat (No. 2, hard winter, Kansas City, bu.)	\$1.20	†\$1.20	\$1.23	\$1.13	\$1.13
Sugar (raw, delivered New York, lb.)	3.74¢	3.74¢	3.74¢	3.74¢	3.50¢
Cotton (middling, ten designated markets, lb.)	18.98¢	18.96¢	18.74¢	20.05¢	16.24¢
Wool Tops (New York, lb.)	\$1.228	\$1.240	\$1.205	\$1.263	\$1.292
Rubber (ribbed smoked sheets, New York, lb.)	22.50¢	22.50¢	22.50¢	22.50¢	22.50¢
FINANCE					
90 Stocks, Price Index (Standard & Poor's Corp.)	74.8	74.5	70.5	60.0	77.2
Medium Grade Corporate Bond Yield (30 Baa issues, Moody's)	4.24%	4.24%	4.26%	4.27%	4.28%
High Grade Corporate Bond Yield (30 Aaa issues, Moody's)	2.80%	2.80%	2.80%	2.84%	2.73%
U. S. Bond Yield (average of all taxable issues due or callable after twelve years)	2.32%	2.33%	2.34%	2.35%	2.23%
U. S. Treasury 3-to-5 year Note Yield (taxable)	1.28%	1.28%	1.28%	1.00%	0.73%
Call Loans Renewal Rate, N. Y. Stock Exchange (daily average)	1.00%	1.00%	1.00%	1.00%	1.00%
Prime Commercial Paper, 4-to-6-months, N. Y. City (prevailing rate)	‡-‡%	‡-‡%	‡-‡%	‡%	‡%
BANKING (Millions of dollars)					
Demand Deposits Adjusted, reporting member banks	28,431	28,183	27,807	25,145	24,382
Total Loans and Investments, reporting member banks	37,714	35,908	35,349	31,393	29,618
Commercial and Agricultural Loans, reporting member banks	6,347	6,353	6,281	6,874	6,556
Securities Loans, reporting member banks	899	802	884	833	968
U. S. Gov't and Gov't Guaranteed Obligations Held, reporting member banks	23,931	22,149	21,488	16,435	14,653
Other Securities Held, reporting member banks	3,442	3,495	3,535	3,716	3,753
Excess Reserves, all member banks (Wednesday series)	2,350	2,710	2,034	2,752	4,655
Total Federal Reserve Credit Outstanding (Wednesday series)	4,494	4,042	3,581	2,400	2,291

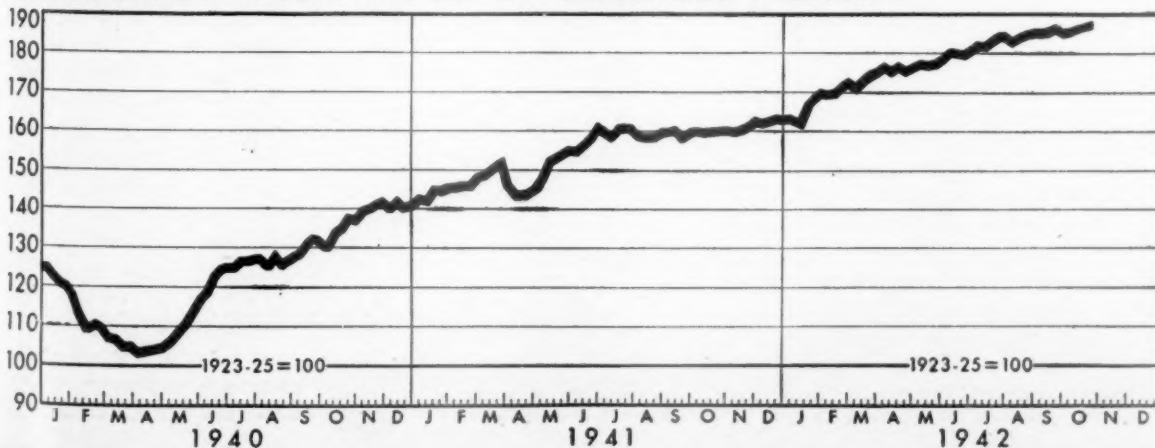
† Preliminary, week ended October 24th.

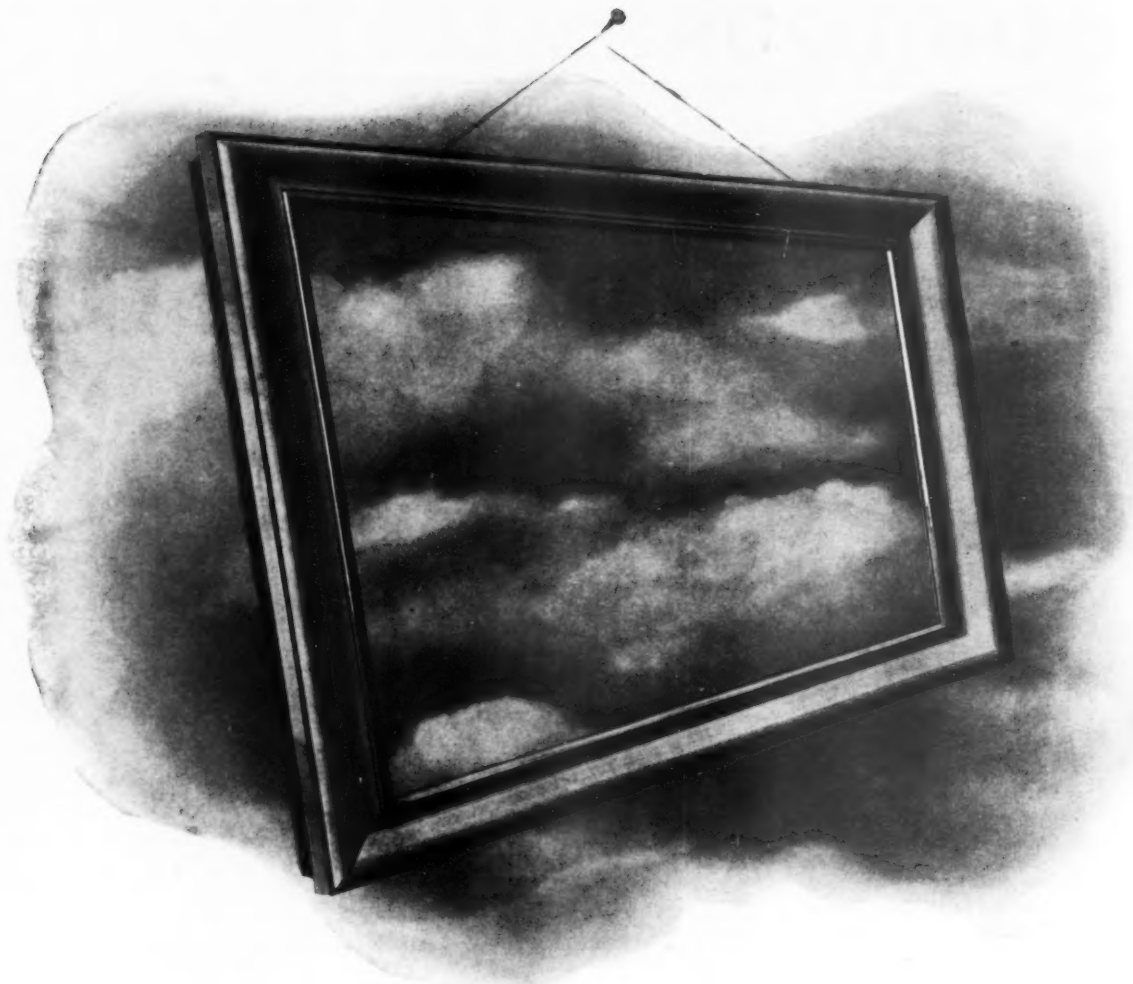
‡ Revised.

§ Ceiling fixed by government.

§ Date for "Latest Week" on each series on request.

BUSINESS WEEK INDEX OF BUSINESS ACTIVITY





PICTURE OF A *Military Secret*

It concerns air—and air conditioning.

Naturally, we cannot reveal all the details. But we can say something about the tremendous advances in air conditioning . . . that have made many new "secret weapons" possible.

We can tell you that temperature and humidity are maintained far more precisely than ever before. That it is possible to reproduce faithfully any required climate. That the equipment that does this is *more compact . . . more flexible . . . more efficient.*

And it is no secret that General Electric research is busy on many new developments to speed up the nation's war effort. From the beginning, General Electric has played a pioneering role in developing the new precision air conditioning.

After the war, *all* users of air conditioning will benefit from today's technical advances. In factories and offices, establishment of an exact efficiency climate . . . including humidity . . . will not only vastly increase workers' output, but will also add greatly to their comfort and morale. Machines will operate better . . . production will be speeded.

With more economical . . . more compact equipment . . . the use of air conditioning will be widespread. More people

will enjoy it in ever increasing numbers of homes, stores, restaurants, theatres . . . even in cars and planes.

General Electric will take a leading part in the providing of peacetime equipment for every use, just as it is taking an outstanding part in meeting today's wartime air conditioning needs.

Air Conditioning and Commercial Refrigeration Department, Division 426, General Electric Company, Bloomfield, New Jersey.

Air Conditioning by
GENERAL  ELECTRIC

THE OUTLOOK

Important Decisions Ahead

More inflation, manpower, production, and rationing moves are due as the pattern of war economy is changed by military necessity and experience with present controls.

For business men—both as war executives and as citizens—the war fronts captured the news headlines this week. Only too obviously, outcome of the battles around Stalingrad, El Alamein, and Guadalcanal would vitally affect the duration, intensity, and even the character of business readjustment to war economics.

Because such battles depend on imponderables of morale, tactics, and generalship, results defy prediction, and strategy must be constantly tailored to events. With it change allocations between the military and civilian economies, between the armed forces and industry, and among types and quantities of weapons. And at midweek, stock prices reflected renewed perplexity over prospects in a reaction from recent highs.

Digesting Job

Right now, management men are digesting latest inflation, manpower, production, and rationing moves.

Justice Byrnes's Office of Economic Stabilization this week clarified salary stabilization policy (Washington Bulletin), and the pattern of National War Labor Board wage control is emerging (page 82).

Mr. McNutt and Gen. Hershey are still debating the immediacy of the certain need for new manpower legislation (cover) even as both work towards additional job-freezing, occupational shifting, and mobilization of labor reserves.

With construction and facilities contracts still geared to "absorb between one-fifth and one-fourth of the total war effort," Mr. Nelson is taking new steps to pare less directly essential projects. Already, according to the American Iron and Steel Institute, soaring merchant and naval shipbuilding alone is taking 20% of the nation's steel output—an indication of how voracious the direct war demands are.

And the week's announcement of coffee rationing served to recall the prospect for extension of coupon plans to ever-widening groups of commodities.

New Taxes Ahead

Meanwhile, tax experts—Paul, Sullivan, George—were getting in their licks on the new bill, which will come up in early 1943, now that the 1942 measure

has finally become law. One certainty emerges from current disagreement—that the needed additional \$6,000,000,000 or more cannot be raised through familiar channels. Novel means—sales or spending taxes, or heavy forced savings—will be needed. Deciding which to use will provoke bitter debate.

Paying Off Debts

But that a decision will have to be made quickly is supported by release of the Department of Commerce's new statistics on short-term consumer debt. They indicate that Federal Reserve restrictions on installment and charge account credit have started consumers liquidating their debts at the rate of roughly \$5,000,000,000 a year—a healthy bite into the "inflationary gap." But, debt is already down from the September, 1941 peak of \$9,720,000,000 to \$7,102,000,000 in July. Clearly, debt

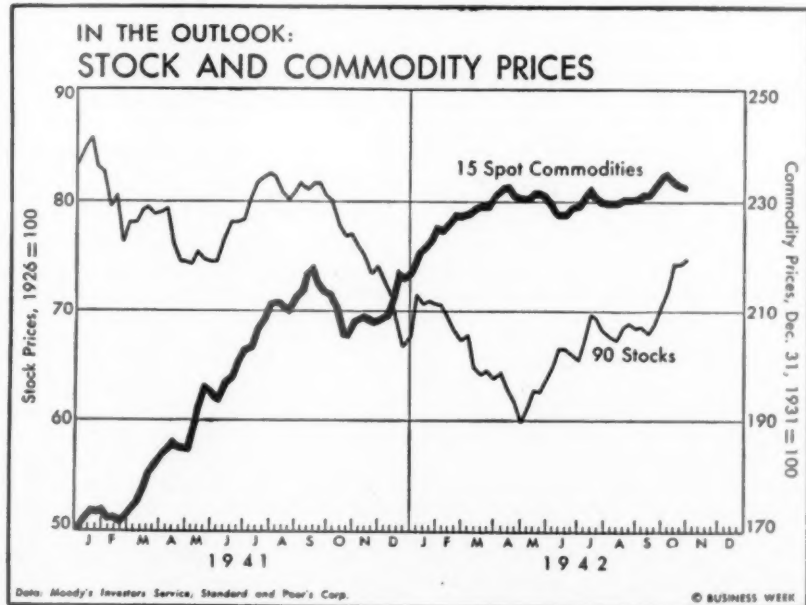
reduction will soon have run its course, and such "savings" will then be disposable for black market spending (page 18).

This excess of demand over supply is compounding Office of Price Administration problems. Inventory control is now reported set for introduction before Christmas—in order to even out stocks of goods among small and large stores and among various areas, and so postpone the need for consumer rationing.

As it is, OPA has been caught in the vise of contradictory public opinion. Criticism now is that commodities, like coffee, should be rationed before distributors' stocks run out, to prevent temporary inequities. But when OPA acted on that theory with sugar, and surplus supplies appeared, the ration was condemned as premature.

Shoes, For Instance

Shoes now illustrate the dilemma. Experts figure 1943 civilian production at around 325,000,000 pairs, over 100,000,000 pairs less than consumers bought in 1941. But, retail stocks are estimated at more than 200,000,000 pairs. Clearly, rationing could be delayed until that cushion is absorbed in the market. Alternatively, an earlier



"Curiouser and curiouser" grows the diversity in stock and spot commodity price curves. Time was when the two moved together during business upswings and downswings. When the defense program first got under way, commodities began advancing. Stock quotations, however, were reflecting

both the worsening in Allied positions and the deterioration in earnings prospects caused by higher taxes and costs. Since the spring, trends have reversed. Commodities are controlled by price ceilings; stocks regained some confidence in the war outlook—and hence, ultimately, for earnings.

use of coupons would permit a higher average ration over a longer period.

Interestingly, even these calculations may be upset by intensifying manpower problems. For, one result of the labor shortage will be to concentrate and contract civilian industry and to release workers, it's just possible that shoe manufacture may be cut below what the materials supply would permit.

Suggestions have already been made that farm output less essential to the war effort be curtailed, so stringent is the farm manpower stringency becoming (Washington Bulletin).

Half-Ration Coffee

Despite OPA assurances that pound every five weeks isn't "drastic reduction," the trade sees cut near 50%.

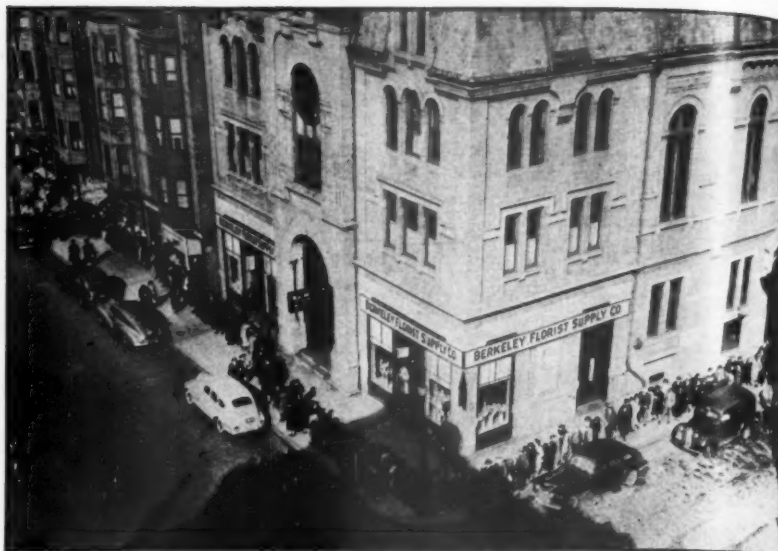
Soothing statements from the Office of Price Administration don't help much to soften coffee rationing for consumer and dealer. Coffee men insist that Leon Henderson got tangled up in his decimals when he declared that a ration of 1 lb. a person every five weeks "is certainly not a drastic reduction." According to their figures, the average coffee drinker will have to cut his consumption just about in half.

• **65% Quota Displaced**—Announced on Monday, coffee rationing will not go into effect until Nov. 28. From then on, consumers will have to use coupons from the backs of their sugar books to get coffee allotments. Each person over 15 years of age will be entitled to 1 lb. in each five-week ration period. This system of direct rationing replaces the looser regulation that limited deliveries to retailers to 65% of their turnover in the corresponding period last year.

On a yearly basis, the coffee allowance figures out to 10.4 lb. for each adult. Henderson compares this with an estimated per capita consumption of about 16 lb. last year and 13 lb. in the ten years before 1941. So far, he says, 1942 consumption is running at the rate of 12.5 lb. per capita.

• **Cut of 50% Claimed**—Coffee men paw the air over the way OPA uses per capita figures in such reassuring statements. Per capita estimates are obtained by dividing total population into total consumption. They make no allowance for children or for adults who drink no coffee. Hence, comparing the 10.4 lb. ration with a per capita consumption of 12.5 doesn't prove that the reduction will be only 20%. Actually, coffee dealers think, it will be close to 50%.

According to best trade estimates, the average civilian coffee drinker sopped up about two cups a day last year,



Not a movie line-up nor a queue of Bostonians waiting for a trolley at a Berkeley Street corner early one morning last week. Rumor had it that a certain store in Boston had some real coffee to sell at ceiling prices.

consuming about 20 lb. of bean. Cutting him to 10.4 lb. will bring him down to just over one cup a day. If all of the 93,000,000 civilians over 15 years old take their full ration, retail sales (not including restaurants, which do not come under the ration order) will total about 967,200,000 lb. in a year. This compares with estimated retail sales of 1,650,000,000 lb. in 1941.

• **Invitation to Hoarders**—OPA's arithmetic isn't the only thing that makes dealers squirm. Retailers can't understand why Henderson announced rationing a month in advance instead of slapping it on quickly—thus almost encouraging hoarding. Coffee men are sure that the next month will bring a wave of panic buying that will strip the little left on shelves and intensify the shortage. Moreover, they point out, only the vacuum-canned coffee will keep any length of time, and most of the hoarded stocks will deteriorate seriously before buyers get around to using them.

Coffee dealers disagree among themselves over the question of whether or not rationing is really necessary. A week ago George C. Thierbach, president of the National Coffee Assn., declared there was a normal amount of coffee in the country and that the shipping situation looked promising. Most importers would agree with this, but retailers, who have to deal with angry customers, are inclined to think rationing was inevitable.

• **How Space is Allotted**—Coffee supply depends directly on shipping, and the amount that comes in will be determined by the way the government allocates available cargo space. In one sense, the coffee shortage is deliberately created since other shipping needs are given

a higher rating than coffee imports.

The trade rarely has more than about three months stock in the country at one time. On Oct. 26, importers' warehouse stocks totaled 421,000 bags (132 lb. each). In comparison, stocks a year ago were 1,583,000 bags. This shrinkage in immediate supply would mean little if dealers could expect normal imports, but in the present situation consumption is running ahead of imports.

• **Shopkeepers' Troubles**—Unlike the importers, most retailers were clamoring for rationing long before OPA finally adopted it. With their allotments cut to 65%, many dealers have been getting into trouble with customers who suspect they are being pushed around. In spite of their explanations merchants found that unpleasantness over coffee shortages was hurting their other business and generally undercutting goodwill. As one retailer put it, "These guys don't want economics. They want coffee."

In some areas local authorities were already working on rationing plans of their own when OPA came through with its announcement. In Cleveland, a committee appointed by Mayor Frank J. Lausche had devised a system using sugar coupons—almost identical with Henderson's plan.

• **Typical Complaints**—Cleveland's coffee troubles are fairly typical although some districts have suffered worse than others. Long lines of coffee-hungry citizens have been standing outside the stores. One housewife complained that she stood in line for three hours to get coffee for her family of 12, and was rewarded with half a pound. Another said she worked all day in a war factory and got none.

America's Food Problem Recast

Imminence of rationing forces complete reconsideration of farm question. Indirect price controls are initiated by ceilings on flour and meat. Subsidies will spur essential production.

Government men have talked about wartime food rationing for almost three years, but Washington's immediate emphasis always has been focused on problems related to food production, processing, and pricing. While major decisions on food supplies and prices have been made almost daily, prior to this week rationing advanced beyond the talk stage only with regard to sugar and meats. This week coffee was added to the list (page 14). From now on rationing, as a major food problem, is on an equal basis with production, processing, and pricing.

Only Cereals and Citrus Safe—Of course, no one will discuss when or what specific foods will be rationed, but it is significant that the Department of Agriculture's conservative Bureau of Agricultural Economics predicts that rationing of a growing list of food products will become necessary during 1943. In fact, the bureau indicates that cereals and citrus fruits are the only two foods that appear entirely safe from rationing.

After the meat rationing system is installed around the first of the year, attention probably will have to be turned to dairy products where rationing will be most difficult. In order to keep the supplies of fresh milk flowing, all other dairy products might have to be rationed, with emphasis on cheese. Rationing of butter immediately runs into the very complicated problem of inter-related fats and oils.

How to reorient the nation's mind from a super-abundance of food to widespread rationing will be the major question facing the man finally selected to head an over-all, centralized wartime food control agency—a U. S. food administration.

Rating the Foods—The Agriculture Department already has started to rate foods according to relative essentiality—on the basis of existing stocks, nutritional values, estimated needs, and processing facilities (BW—Oct. 3'42, p. 5). For example, with huge supplies of cereal crops, sources of edible fats and oils become more important than wheat. Vitamin-loaded green peas, which are staples in almost every family's diet, become more important than asparagus. Until stocks of wheat are dramatically reduced, feed crops, livestock, and dairy production are the most important subjects on the list of basic foods.

From here on out, the line of demarcation between essential foods and less-essential foods will become clearer and clearer. Selective Service has been press-

ing the Agriculture Department for a list of so-called essential crops so that draft boards can be given specific deferment instructions for men working on such crops. Price support, fertilizer, transportation, and farm machinery will

be concentrated in 1943 on the more essential foods; by 1944, these things may be entirely denied to foods not on the essential list.

1942 Peak Hard to Top—There is not much hope that overall farm production can be pushed next year to levels exceeding 1942. Agriculture Department men believe that the nation reached its farm production peak this year. Faced with the knowledge that more food cannot be coaxed out of the farming system, government farm price policies will be devoted to holding production as close to 1942 levels as possible. Subsidies may

000000 UNITED STATES OF AMERICA
OFFICE OF PRICE ADMINISTRATION

WAR RATION BOOK TWO

IDENTIFICATION

THIS BOOK NOT VALID

(Name of person to whom book is issued)

(Street number or rural route)

(City or post office) (State) (Age) (Sex)

ISSUED BY LOCAL BOARD No. _____ (Country) (State)

(Street address of local board) (City)

By _____ (Signature of issuing officer)

SIGNATURE
(To be signed by the person to whom this book is issued. If such person is unable to sign because of age or incapacity, another may sign in his behalf.)

WARNING

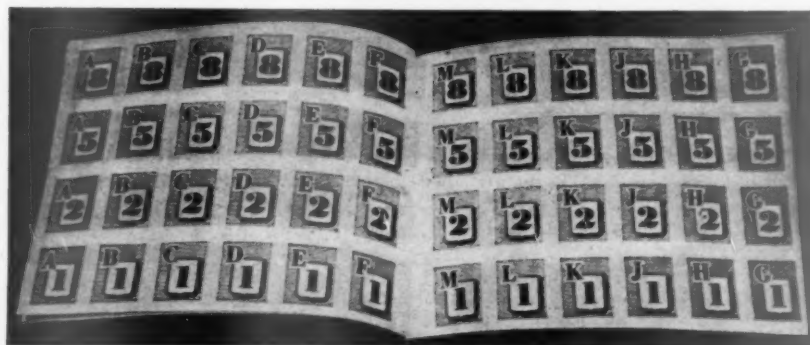
- 1 This book is the property of the United States Government. It is unlawful to sell or give it to any other person or to use it or permit anyone else to use it, except to obtain rationed goods for the person to whom it was issued.
- 2 This book must be returned to the War Price and Rationing Board which issued it, if the person to whom it was issued is inducted into the armed services of the United States, or leaves the country for more than 30 days, or dies. The address of the Board appears above.
- 3 A person who finds a lost War Ration Book must return it to the War Price and Rationing Board which issued it.
- 4 PERSONS WHO VIOLATE RATIONING REGULATIONS ARE SUBJECT TO \$10,000 FINE OR IMPRISONMENT, OR BOTH.

OPA FORM NO. R-121 12-30227-1

RATION BOOK FOR ALL

An unhappy new year with additional war restrictions will be ushered in about Jan. 1 when the OPA's all-purpose ration book reaches some 130,000,000 civilians. Every individual from infants to the aged must have one. Mathematical wizards have given the coupons a flexibility that can be applied to any commodity. The books have a red section and a blue section, each of four pages. Colors or other

symbols will differentiate commodities rationed. Thus, the row of red coupons bearing the number 8 might be used for straight rationing of gasoline with each coupon good for four gallons. Numerals on the coupons makes them adaptable to "point" rationing. Thus, if 2½ lb. of meat per person per week is the ration, a week's quota might be represented by the blue G coupons, totaling 16 points. A pound of pork might be had for ten points, a pound of beef for eight.



be tried in some instances, primarily dairy production, but prices and government checks are beginning to lose their effectiveness as regimenters of farm production.

Recognizing that food production is reaching upper limits, the farm bloc on Capitol Hill is making its last stand for the highest obtainable farm prices for the duration, and perhaps for the early part of the postwar period. This is what is behind the recent congressional blasting at Price Administrator Henderson.

● **Battle Over Payments**—Primary contention of the farm bloc has been that President Roosevelt had no authority to subtract benefit payments from the 100% parity returns guaranteed for farmers by the Price Stabilization Act. For example, this means cash wheat at \$1.02 a bushel against \$1.34 full parity wheat. The Administration claims that the act guarantees the farmer only a full 100% parity for his product, but does not say how he is to get that parity. Thus, if the government will lend the farmer 85% of parity for his wheat and will then make up the other 15% in benefit payments, the law is met.

The farm bloc contends that the law guarantees farm prices at full parity—prices as differentiated from the farmer's total return.

● **Subsidies Unwanted**—Another sore spot between Capitol Hill and the Administration is the use of new subsidies. Farm bloc men would rather see a permanently high price level than bag temporary wartime subsidies. Since the market price of wheat is somewhat below the 85% Commodity Credit Corp. loan value, the government last week had to promise farmers a subsidy of several cents if they would redeem their loan wheat for sales to the miller. Without this subsidy, farmers would permit their wheat to go to the CCC by loan default. CCC is forbidden to sell wheat for flour under 100% of parity, and with the flour ceilings, millers can't pay such a price.

Farm senators argue that the Administration should let the price of wheat, flour, and bread go up to the point where the farmer would be encouraged to sell in the open market. Henderson countered with the defense that subsidization of wheat for flour would cost the government only twenty to thirty million dollars a year, while increased bread costs would cost a hundred million dollars.

● **Ceilings Indirect So Far**—While there has been a lot of talk in Washington on farm price ceilings, actually OPA has yet to impose a direct ceiling on a major farm commodity. For example, the indirect ceiling on wheat is governed by the direct temporary ceiling on flour and the General Maximum Price Regulation ceiling on bread. The indirect ceiling on hogs is set by the new direct dollars-and-cents ceiling on wholesale pork.

WPB's Hot Potato

Semiconcentration in farm machinery field engenders lots of heat but indicates meager progress towards nucleus plan.

WPB's semiconcentration of the farm machinery and equipment field looks like a potato hot enough to sizzle the government's fingers badly. It may mean that the concentration program, now only in low gear, is stalled still more. For farm equipment manufacturers are grumbling that the new order (L-170) is unworkable, while farmers will wait that the war effort takes their manpower and now their new machines.

● **WPB vs. D. of A.**—What makes WPB's plight even sadder is that the Department of Agriculture apparently is also frowning on the regulation. The department's idea was that production of new farm equipment shouldn't be cut lower than about 60% of 1940 levels.

But WPB's final version of L-170 calls for a production quota geared to a mere 20% of 1940 volume (by weight). Manufacture of repair parts is permissible at 130% of 1940 production (on a dollar basis). Thus WPB hopes to save about 500,000 tons of critical material in the manufacture of such equipment as planters, plows, cultivators, harvesters, threshers, tractors, dairy equipment.

● **All May Operate**—Because of specialization in the manufacture of farm ma-

chinery, WPB found it impossible to invoke true concentration. All of the 1,600 producers in the field may continue to operate in some fashion, but wherever possible the little fellows get much higher quotas than the bigsters.

WPB has divided manufacturers into three classes: those whose sales were over \$10,000,000 in 1941 (Class A); those with sales between \$750,000 and \$10,000,000 (Class B); and those with sales below \$750,000 (Class C). By shooing the big fellows into the background, WPB hopes to free some labor, especially in the Rock Island-Davenport-Moline triangle.

● **Industry's Objections**—Manufacturers explosively contend that this program is an unworkable piece of theory, because:

(1) No provision has been made for distributing the products of the favored Class C manufacturers, most of whom now sell only locally or regionally. Supposedly the dealer system—as important to farmers as it is to manufacturers—will begin to crumble, or at least be pitched into chaos.

(2) Semiconcentration has all the faults of mere limitation—that is, production is cut to the point where it becomes an uneconomical process.

(3) Despite priority ratings as high as A-3 for new machinery and AA-2X for repair parts, there's no guarantee that metal will be forthcoming. In the end, say manufacturers, production may be much lower than 20% of 1940.

(4) Because repair parts are made on the same machines and by the same men as new equipment, stoppage of



BUYING—NOT SELLING

Since Uncle Sam became the industry's best customer, it isn't much of a job to sell steel. So 2,500 salesmen and steel executives of the nation's steel companies are ringing the doorbells of approximately 70,000 com-

panies in a search for industrial scrap. Checking a list of dormant scrap, which was located at the Pressed Steel Car Plant, McKees Rock, Pa., are (left to right) C. C. Wehling of Jones & Laughlin Steel Corp., Pittsburgh; C. G. Ingraham and A. M. Wallace of Pressed Steel Car Co.



THIOKOL RETREAD

When Stanley Mason (left), a draftsman of Trenton, N. J., has coaxed the last bit of mileage from a retread just issued to him by Walter Lochner of his local rationing board, what's left of the tire will be a notable war relic. To Mason went the first synthetic rubber retread (Thiokol) to be issued to a civilian war worker.

new machinery manufacture endangers the flow of necessary repair parts.

(5) Many farm machinery producers are old firms with old buildings, old lathes, etc. They reputedly cannot convert to war work on any large-scale basis, and some provision should have been made for this contingency by WPB.

• **What's Ahead?**—Despite the growing storm, it is dubious whether WPB in the future will be awfully cautious of concentration.

Even before L-170 was issued, the concentration program had reached a critical state. Whereas WPB in July had warned that concentration would come right and left this fall (BW—Jul. 25'42, p15), the flood is still a tiny trickle. The really big reason for the delay is that WPB is trying to figure out some diplomatic way of telling one manufacturer he may stay in business, while informing his competitors that they must convert to war work or (failing that) fold up for the duration. The practical and psychological problems of "designation" are genuine sticklers.

• **Snags Encountered**—Meantime, criticism has been mounting that WPB's only real concentration job thus far—in the stove industry (BW—May 23'42, p16)—is running into snags. Some manufacturers apparently thought that once they were concentrated, they'd get all the metal their schedules call for. Such, of course, has not been the case.

Furthermore, the smaller stove manufacturers who remained in business got befuddled by OPA's price ceilings, and

often couldn't fill rush government orders on time. Therefore, WPB is re-examining the stove-heater situation, with a view to finding out what ails the test-tube baby. A similar examination, incidentally, will not be undertaken in the typewriter field (BW—Aug. 8'42, p5) nor the bicycle field (BW—Sep. 12'42, p17) inasmuch as these industries were concentrated only in a loose sense of the word.

Until the stove review is completed, and until the problem of "designating" is made more palatable, WPB's concentration program seems destined to be a straggler. Currently it appears that the going will be even more precarious as the farm complaints rise to full volume.

OPA Signposts

GMPR's first six months reveal an improving pattern of price control, but one that is still subject to big hazards.

This week the General Maximum Price Regulation was six months old. Characteristically, OPA brushed off the event without even so much as a press release. Nonetheless, plenty of significance may be attached to it, for scrutiny of the half-year period reveals trends of major importance.

• **Why Suspicions Arise**—It's OPA's irreverence for formalities (unless they happen to be legal) that has made the majority of business men suspicious of Leon Henderson and his disciples. The common impression is that Henderson is operating a progressive school for bright, wayward, and completely uninhibited children who enthusiastically pore over economic problems, write diatribes about them, fog the diatribes up with legal jargon, and then expect the business world to live under such so-called rules.

• **Success with GMPR**—And yet, despite all the faults—real and imagined—that have been attributed to it, OPA has scored an astounding success with GMPR.

Since General Max was born, the cost of living has risen a mere 1.6% (as against about 5% in the preceding six months).

Where OPA had actual control over prices, that portion of the index went into reverse, dropped 0.3% (as of the latest reckoning, which runs through September).

Where OPA had no legal control, the index continued its merry upturn, rose 4.7%.

Statistically, OPA thus has a beautiful batting average—much better than expected. But, as everybody knows, it's one thing to keep prices down when shelves are well-stocked, and quite an-

other thing to repeat the feat when shelves are woefully bare of all stock.

• **Nearer Practicality**—Here again, however, OPA shows evidence of being able to cope with the future. Today its views have jelled, its plans are much nearer practicality. In order to continue the near-miracle of the past months, OPA has evolved a blueprint which looks like this:

(1) For semiessential commodities, a single nationwide price will be ordered whenever scarcities breed irritating price-violations. Such already is the case with respect to women's nylon hose (prices for which have been frozen at a flat maximum figure for each grade) and with respect to many durable goods. The nation-wide price makes it easy for the shopper to remember the legal ceiling, will therefore be invoked more and more frequently to stop black market quotations.

(2) For bread-and-butter commodities, rationing is the solution for unfairness in distribution. Rationing by



IN MEMORIAM

In San Francisco last week Maritime Commission officially turned over the new Liberty freighter, S.S. "Andrew Furuseth," to the War Shipping Administration for operation by the Matson Navigation Co. Appropriately enough, leaders of the Sailors Union of the Pacific were on hand to honor the ship named after the founder of their union, the "grand old man of the sea," the late Andy Furuseth. Tall, lanky, gum-chewing Harry Lundeberg (center), Furuseth's successor, now head of the S. U., led the cheering for "Old Andy."

itself, however, is no guarantee of price control, though it does put the consumer on the alert against cheating. Actual price-control in this field will take the form of set margins, or some other variation of the margin principle, policed by consumers and the competitive influence of the big law-abiding stores.

(3) For textiles, and items where quality and style show countless variations, standardization and/or labeling will be the yardstick of both price and value. This will alleviate the plague of "hidden inflation" (less quality at the same or higher prices). Here again identical prices are a possibility, especially on the coming "victory" models.

• **Police Problem**—In jelling its policies into this simpler pattern, OPA has carefully taken into consideration the fact that it will never get an adequate police force, and that the way things are currently shaping up, neither retailers nor housewives understand what proper price ceilings are. (A survey in Indianapolis showed that less than 1% of housewives had any idea of the barest rudiments of price control.)

The solution to the lack of government police force is a spontaneous one. OPA has observed that giants like Macy's and the A. & P. stick to ceilings, and that their competitive influence keeps other retailers in line. Since the \$100,000-and-over independents plus the chains account for about half of the nation's retail sales and exercise an almost airtight control in the important food field, they constitute a half-way automatic policing system.

• **Educational Program**—Aside from competition, there is no way to keep the other retailers in line except by better education of both the housewife and the retailer.

OPA is therefore undertaking a program of dealer education by issuing lately a sort of house organ, which explains price orders in the simplest English, stripped of all lawyer-like language. The formula is "do this" and "do that," and you will be complying with the law.

Housewives will be educated much the same way. That is, streamlined

literature will be distributed by the rationing boards and through the usual channels of communication. As time goes on, this information will continue to acquire even greater simplicity, for the trend toward nation-wide prices will make it possible to get closer and closer to the terse format of mere price lists.

• **Aces in the Hand**—Thus between the trend toward nation-wide prices wherever possible, standardization (at least to the extent of "comparison models"), the yeoman work of the retail bigsters in holding down prices, and an emphasis on more straightforward publicity, OPA has quite a few aces in its hand.

Nevertheless, prices will definitely not be held at March levels. That fiction long ago was exploded.

Even under ideal conditions of farm and wage controls (which we haven't got), prices would tend to change upward. Transportation costs are rising. The productivity of labor is sloping off. Marginal materials and production are taking their toll. The use of substitutes is often more expensive.

• **How Well?**—Therefore a rising price-trend is an inevitability. OPA's measure of success will be how well it controls that rise.

Subsidies are one palliative. But subsidies, despite the President's indorsement, still mean a tussle with Congress, and Congress is definitely not one of Henderson's friends.

Meanwhile, OPA will try to control rises by initiating them within OPA and clamping down on the granting of individual relief (BW-Oct.24'42,p28). This means junking Section 18 of GMPR and substituting in its place provisions for big, broad adjustments on an industry-wide or commodity-by-commodity basis.

• **Subsidies Needed**—In the end, though, subsidies are necessary. It's cheaper to subsidize than let prices spiral, and it's more equitable. Why, argues OPA, should the buyers of, say, hats be penalized by price rises occasioned by the war? The fair thing to do is subsidize hat production, thus spreading the cost over the whole nation.

Lack of subsidies eventually could wreck the price control program, just as the failure of the French government to counteract the devaluation of the franc with enough subsidies ruined the program in that nation. In the interim, though, OPA has been the beneficiary of a few windfalls.

• **The Inflationary Gap**—For one thing, that \$17,000,000,000 inflationary gap (difference between potential money demand and goods available) may be overestimated. For a second thing, civilian production has held up better than expected. And for a third point, savings have been running higher than OPA originally estimated. Statistics on the minutiae of these phenomena are con-

"HOT MONEY" FIRE UNDER PRICE CEILINGS

Pressure against OPA's price ceilings continues to be strong, as the figures below show. Currently the excess of disposable income (income payments less taxes) over expenditures is running at the rate of \$25 billion annually. Technically, this excess is called "savings." Part of it is voluntary in the sense that consumers would ordinarily choose to put some money into insurance premiums, debt repayment, bank accounts, etc. But the rest—and larger portion—is money that can't be spent legally as goods become scant and prices are pegged. It is this "hot money" which constitutes a severe threat to ceiling prices, a big invitation to black-market quotations.

	Annual Rate of:		
	Disposable Income (billions)	Expenditures (billions)	Savings (billions)
Jan. 1941	79.5	72.2	7.3
Feb.	80.8	75.0	5.8
Mar.	82.0	74.8	7.2
Apr.	83.5	75.7	7.8
May	86.3	77.3	9.0
June	88.6	76.3	12.3
July	89.8	78.3	11.5
Aug.	91.2	81.6	9.6
Sept.	92.6	76.9	15.7
Oct.	94.1	75.5	18.6
Nov.	94.9	78.7	16.2
Dec.	100.4	78.4	22.0
Jan. 1942	98.8	83.6	15.2
Feb.	99.6	81.1	18.5
Mar.	100.4	80.8	19.6
Apr.	102.7	80.1	22.6
May	103.5	79.8	23.7
June	106.1	79.2	26.9
July	108.1	82.7	25.4

Data: Office of Price Administration; annual rate seasonally adjusted.

fusing but don't bother about them. The point is that the inflationary gap isn't as gaping as expected.

Not windfalls, but definite credits, are the following:

Rent-control has functioned smoothly, successfully. The index of rents has dropped from 109.9 to 107.6 since May. OPA has won enough legal victories to make the retirement of its vast retinue of lawyers a possibility. At least, the lawyers are giving ground to the administrators.

Rationing, though a headache, has caught on with the public to the extent that the confusion has died down. In the future, rationing will become even more "homey." The details will be handled by 50,000 local people.

And finally, OPA has so far not shown any signs of becoming an NRA-like juggernaut. Less than 4,000 people are employed in Washington. Without rationing, OPA would indeed be a peewee.

• **Business Pressure**—The big danger to

COST OF LIVING & GMPR			
(1935-39 equals 100)			
	Total Cost of Living	Price Controlled Products	Uncontrolled Products
Jan. 1942..	112.0		
Feb.	112.9		
Mar.	114.3	116.2	115.7
Apr.	115.1	117.3	116.0
May†	116.0	118.0	117.4
June	116.4	117.1	120.1
July	116.9	117.2	121.4
Aug.	117.4	117.0*	124.1*

† Enactment of General Maximum Price Regulation.
* Preliminary.
Data: Bureau of Labor Statistics.

OPA's future—aside from lack of subsidies—is that the agency is regarded as inherently alien by business men. Disgruntled elements have already indicated that Senator Murray's Small Business Committee will be urged to put pressure on Henderson to break retail ceilings.

Thus OPA's problems are not solved. But OPA, all in all, seems more capable of solutions than at any time in its highly checkered history.

More and more Washington observers are beginning to believe that it will yet be possible for Henderson's erstwhile kindergarten to wind up with a record of honesty, ability to "take it" under fire, and outright achievement unmatched by any other major war agency.

New Plant Curbs

WPB acts to put brakes on unnecessary war construction and on federal projects through agencies to survey all work.

Ever since early summer, WPB has been afraid we were spending too much time and effort getting ready to produce and not enough in actual production (BW—May 23 '42, p. 5). Last week WPB clamped down.

• **Expansions Curtailed**—About 40% of 1942's \$45,000,000,000 war effort will go into construction and into production machinery and tools. Last May, WPB ordered the services not to schedule any further facility expansions, and it looked then as if construction and tool building would be cut down in 1943 to something like normal levels.

Nonmilitary, federal construction was discouraged by low (or no) priority ratings. And limitation order L-41 (BW—Apr. 18 '42, p. 28) forbade the initiation in any 12-month period of new civilian construction projects costing more than \$500 (private residence), \$1,000 (farm building), and \$5,000 (all other classes) without WPB authorization. Later (BW—Sep. 12 '42, p. 22) the private residence ceiling was cut to \$200, while the ceilings on commercial work were lowered 80 to 96%.

• **Flood Control Pushed**—L-41 limited civilian work pretty effectively, except that it didn't reach projects which were under way before Apr. 9. But many a federal flood control or power project was pushed ahead with a low priority rating by scraping up materials somewhere or deferring parts of the work which used scarce materials.

Worse, the attempt to check the military's initiation of new projects was a complete flop. The armed services went right ahead scheduling new factories, airfields, and such, attaching ratings to

them on their own authority. If all present plans go through, next year's construction and machinery installations would equal or exceed this year's \$17,800,000,000. Hence WPB's crackdown.

• **Wringer Cure**—WPB told the services and the federal construction agencies that it proposed to put their projects through the wringer, issued tentative stoporders on certain outstandingly unjustified ones (identity unrevealed), forbade initiation of any project—civil or military—without WPB approval, and set up machinery to carry out this program.

A Facility Clearance Board and a Facility Review Committee were set up in WPB. Ferdinand Eberstadt, vice chairman of WPB, heads the board, with Col. Gordon E. Textor as acting chairman. Textor, an Eberstadt man who has been on the staff of the Office of Program Determination, is chairman of the review committee.

• **Necessity Test**—The board, made up of representatives of the Army Services of Supply and Air forces, Navy Procurement and Bureau of Aeronautics, the Maritime Commission, and WPB's Office of Civilian Supply, will review all applications for new projects costing more than \$500,000. The committee will review smaller new projects and will go over all existing projects, throwing out those that don't appear justified.

WPB objective is to cut deep enough to get next year's program down to about \$12,000,000,000, of which \$8,000,000,000 would be construction and the rest installations. Of the construction, perhaps half would be direct military facilities—airfields, contonments, and such.

Cotton vs. Rayon

Rumpus in the Senate over fire cord for Army brings out a struggle for position in the post-war industrial picture.

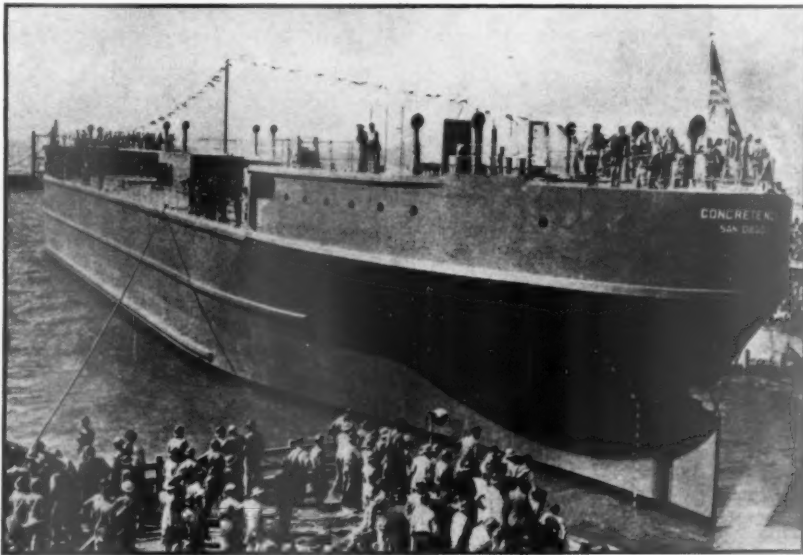
In one sense, the Southern senators' fight to force Army use of more cotton as well as rayon cord tires is just another of frequent efforts to check the swing from natural to synthetic fibers.

In another sense, Senator Allen J. Ellender's agriculture subcommittee on tire cord is only one of many arenas in which Americans are taking a little time out from the production battle to joust for position in postwar business.

• **WPB's Order**—Last week the War Production Board, upon request of the Army and of Rubber Director William E. Jeffers, ordered the rayon industry to convert facilities for production of 50,000,000 lb. of high tenacity cord per year, to be used in bullet-proof gas tanks and in tires for airplanes and heavy combat vehicles. This will be in addition to the 37,000,000 lb. currently produced.

Witnesses said that the 50,000,000 lb. of high tenacity rayon would equal about 100,000 bales of cotton for tires. But the conversion rayon will not all displace cotton; much of it will go into tires and gas tanks that never have been, and would not have been, made of cotton cord. Rayon cord has been gaining steadily on cotton in special and quality tires since 1935.

Another minus sign in cotton's case



CONCRETE NO. 1

Despite heroic efforts on the part of an East Coast shipyard to launch the first concrete fuel barge since 1920,

honors go to Concrete Shipbuilders' yards in California where "Concrete No. 1" has just been launched. The 14,000-ton craft which is 375 ft. long has a liquid capacity of 8,000 tons.

is that the additional rayon production, being composed 75% of cotton linters cellulose, extensively consumes the growers' crop. Cotton farmers, however, feel that linters is the cottonseed oil man's crop, not theirs.

● **Tire Construction**—All parties concerned admit that rayon cord tires are superior to cotton. The flexing of a rolling tire generates internal heat; the bigger the load and the faster it rolls, the more heat. This heat tends to "toast" and weaken cotton fiber, but rayon can take it. Therefore, a more durable and more reliable (militarily important) tire can be made of rayon cord, and with more cord and less rubber.

Volume production of Army tires from Buna S synthetic rubber, which heats up even more than tree rubber does, will begin late in 1943. So the Army insists on starting the rayon conversion now, to be ready by next fall.

Since WPB has already issued its rayon conversion order, one might reasonably ask what the cotton congressmen hope to gain through Senator Ellender's hearings.

● **Jeffers Seen as Target**—A spokesman for WPB, which is hotly pro-rayon cord, said the investigation was intended to make a liar out of Jeffers, who gave Washington a laugh the other day by telling the Senate farmers that the rayon conversion would go through, come hell or high cotton surpluses.

In fact, Ellender did catch Jeffers off base with no visible authority from the Army for the conversion, and Maj. Gen. Brehon Somervell, chief of the Services of Supply, had to write a letter with unseemly haste to the rubber czar, asking for the additional rayon.

But the astute Senator Ellender is not wasting his time on mere revenge against Jeffers, nor is he foolish enough to fly in the face of patriotic fervor with a plea for cotton cord, which everybody now knows would be a liability for soldiers fighting in planes and vehicles.

● **Low-Gage Cotton Cord**—Ellender wants the Army to try out a low-gage cotton tire cord, under development for several years by the Bibb Manufacturing Co., with four plants in Georgia. This company claims that its cord resists heat and otherwise performs as well as rayon in combat tires.

The committee made Army witnesses admit they hadn't even heard of Bibb cord until recently; that the Army started experiments with it in noncombat tires in the last few weeks; that it has not even started tests on combat tires. In fact, Gen. Somervell states that the Army is not interested in testing the Bibb low-gage cord for use in combat tires.

Witnesses said that if Bibb cord proves out, the Army will use it, but only for tires smaller than 7.5 in. Com-

bat tires are all big, and big tires heat up much more than smaller ones.

● **Ellender vs. Army**—In reply to questions, the Army says it never was offered low-gage cotton cord tires by any of its regular suppliers of the combat type. Senator Ellender snorted that those companies are interested in rayon, and that he understood they have their own plants. The Army should not have expected any such offers, he said.

Some committee members indicated plainly that they believe the big tire and rayon companies are in cahoots and are planning no good future for cotton. Nearly 750,000 bales of cotton have been going annually into tires, the country's largest cotton consumer.

There are quite a few dollar-a-year men in the WPB tire cord picture, and the congressional cotton men are suspicious of their intentions with respect to rayon. When Ralph E. Loper, WPB conversion chief, was asked how the 50,000,000-lb. conversion was to be divided among Du Pont, American Enka, American Viscose, Industrial Rayon, and North American Rayon, he said that the figures had come to him as confidential.

● **D. of A. Attitude**—Department of Agriculture cotton men say that the little tire companies have neither the patented processes nor the expensive equipment to buck the big four (Good-year, United States Rubber, Firestone, and Goodrich), and that they fear these companies will swing the industry rapidly to rayon after the war. At this

time, however, seven tire firms, including Armstrong Tire & Rubber, are experimenting with Bibb cord.

The D. of A. cotton men admit that if rayon makes better tires, either for war or peace, at an equitable price, rayon ought to win. They say that if cotton loses out, now or later, its own institutions are to blame; that the synthetic textile people have been far-sighted, bold, and generous in research, while the promoters of cotton, though it may have had enormous possibilities, played penny ante.

Truck-Bus Knot

ODT tries to get better observance of its orders, but certificate applications come in slowly. Pooling plans set.

Like OPA in its early days, the Office of Defense Transportation is finding out that issuing regulations is one thing, but getting compliance is quite another. This problem is currently particularly acute in the truck-bus field, numbering 4,890,000 nonmilitary trucks and 154,000 buses.

● **Slow to Respond**—In order to operate legally after Nov. 15, the truck or bus operator must have a Certificate of War Necessity (BW—Sept. 19'42, p. 18). Yet despite all the elaborate precautions ODT took to inform truck-bus opera-



DOUGLAS HEADLINES

Apparently one of the prerequisites to female employment at a Douglas Aircraft Co. plant in California is the

ownership of a turban. In one day recently 1,000 women (and 996 turbans) joined the Douglas war production army not to mention some 500 hatless males.



Triple-threat

One of the best ways to put the squeeze on the Axis is to produce better airplanes, faster.

This giant, triple-action press—using hydraulic, pneumatic and hydromatic pressure—is built for that job.

Built to the specifications of Boeing engineers, this press and a twin at Boeing's Midwest plant are unique in the aircraft industry. They are monsters that form steel, duraluminum or aluminum with equal ease.

The job of this press is to squeeze out airplane parts, to make them exactly alike, and to make them fast.

Right now it is turning out fillets, angles, cowlings, stiffeners, bulkhead channels and exhaust shrouds for the Flying Fortress.*

It makes some of these parts 75 times faster than the machine it replaced.

This performance is one of the many reasons why Boeing production is steadily increasing, why Boeing was selected as the first aircraft company to receive the Army-Navy award for high achievement in production. (The rate of output of Flying Fortresses is now more than three times what it was on the day of Pearl Harbor.)

The pressure is on at Boeing, day and night. This heavy press, by no means the most powerful of the Boeing presses, is a symbol of efficiency in airplane production. It is one of a team of presses, one of a team of thousands of machines, part of the unbeatable American system of combining men and machines to shape our ends.

The increase of efficiency in manufacture . . . for peace and war . . . is only one of the many different projects that form a constant part of the Boeing engineering schedule at Seattle and in the Middle West and Canada.

DESIGNERS OF THE FLYING FORTRESS • THE STRATOLINER • PAN AMERICAN CLIPPERS

BOEING

*THE TERMS "FLYING FORTRESS" AND "STRATOLINER" ARE REGISTERED BOEING TRADE-MARKS

Hitch It On and You've Got a Bus

Busman's holiday may soon take on a new meaning in the lives of certain Detroit workers. If an innovation offered as a solution for the auto center's transportation problem catches on, these workers—besides holding down their regular factory jobs—will be bus operators in their own right.

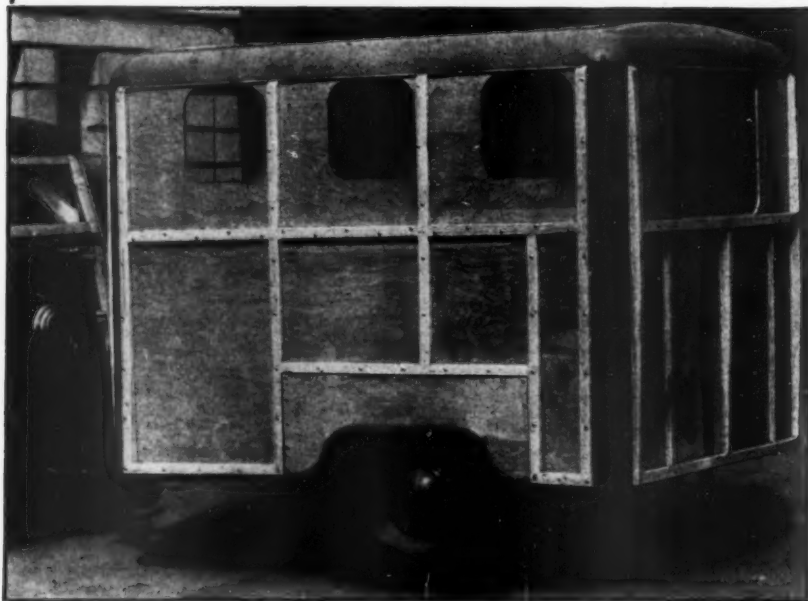
Detroit's Department of Street Railways is toying seriously with the idea of augmenting the municipally-owned transit system by use of nine-passenger, two-wheel trailers hitched to private automobiles. The proposal is that defense workers be licensed to operate such D.S.R.-owned outfits over regular routes between their home areas and their plants. Regular fares would be collected.

One trailer of this type has been

ordered for experiment. It will be delivered soon by Twin Motor Coach Co., Kent, Ohio. The body is of wood; plain seats ring the interior. Save for hardware and bracing, the only metal required is for axles and wheels. Cost approximates \$400.

Not the least of the problems to be worked out would be keeping tab on the receipts and determining just how they should be split between the D.S.R., as owner of the trailer, and the driver, as owner of the car.

Convinced that the difficulties aren't insurmountable, the D.S.R. nonetheless suspects that trailers on its regular buses may prove the most practicable immediate measure. Several manufacturers have sought to provide bus trailers of 21 to 25 passenger capacity.



tors of what they had to do, reports indicate that only about 6,000 to 8,000 applications are being sent in daily. That means either a flood at the last minute or a flock of violations.

Truck and bus operators meanwhile are squawking that the 35-mile speed limit is a joker since trucks and buses are geared to 38 m.p.h. and up (BW—Oct. 24'42, p16). ODT impatiently says anybody knows that machinery wears longer when operated slowly.

• **Speed Multiplied by Hours**—The implication, of course, is that the labor situation really is behind the truckers' and bus operators' squawks. Currently the bigger operators have union agreements calling for 60 driving hours a week. If a 35-mile speed limit is observed, each driver turns in less mileage.

As the situation now stands, ODT isn't going to revise any orders for what

it thinks are labor reasons. The only thing that will bring about revamping of the rules is a clear-cut demonstration that truck-bus equipment isn't built to work properly at 35 m.p.h.—and revision isn't any too close.

• **Pooling Hasn't Materialized**—Though pestered by such disputes, ODT nonetheless is still ploddingly trying to knit a lot of elusive strings into the pattern of its original objective: pooling of equipment. To date voluntary pooling has been negligible except for a four-company effort in Chicago (BW—Sep. 26'42, p22). That probably could have been expected, especially in the local carrier field where competition and the independence of smaller operators prevented any real get-togethers. ODT hasn't given up, however, and is working on a twofold plan.

The first is merely a continuation of

a long series of warnings, in the hope that they'll eventually soak in. Latest to get the alert is the farm field (1,500,000 trucks). ODT says that farmers, carriers, and processors are currently duplicating hauls and wasting equipment. Therefore, the three should voluntarily get together, zone markets, allocate hauls, and conserve equipment. Like all voluntary plans, this one calls for approval from ODT and the Department of Justice wherever it is put into effect.

• **Cut Mileage or Pool**—Indirect compulsory pooling will be the final strategy. ODT has revamped that portion of the rules calling for a 25% mileage reduction. When a carrier is granted his fuel allotment he may surprisingly get 100% of last year's quota. But—and here is the squeeze—he may, as time goes on, be cut more and more, until the cut is so much greater than 25% that pooling is the only salvation. This is ODT's real ace in the hole.

Meantime, a second joint-action pool has been set up by common carriers engaged in over-the-road trucking. This one affects the R-B Freight Lines (Aberdeen, S. D.) and the G & P Transportation Co. (St. Paul, Minn.). Hereafter this duo will apportion less-than-truckload freight so as to avoid duplicate hauls.

Bromide Backfire

Five makers of headache remedies cited by FTC. Now the proprietary drug people wonder if they backed right agency.

During the 1933-1938 fight on Capitol Hill over new legislation to control the food, drug, and cosmetic industries, proprietary drug men gave their support to the Federal Trade Commission as against the Food and Drug Administration on the question of which agency should get control of advertising. With this help, FTC won the fight and now has control over food, drug, and cosmetic advertising, while FDA's control is limited to contents and labeling.

• **Headache Remedies Cited**—This week proprietary drug men wondered whether they had backed the right horse. They have been having their doubts about FTC for a long time, but the question came to a head when that agency issued five formal complaints against the nation's leading nationally advertised acetanilid-bromide headache remedies—Bromo-Seltzer, B. C., Stanback, Capudine, and Chelf's.

The burden of FTC's complaint is that companies selling these products do not include, either in advertisements or labeling, warnings to consumers that violation of the dosage instructions—

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Tanks are not like Camels

THEY'RE *always* thirsty—these lumbering monsters of mechanical war. Satisfying their appetites for gas, oil and water is an urgent task of our Army's Services of Supply.

Here's where the "blitz can" comes in—a handy five-gallon container of almost any liquid. Rheem makes them by the thousands daily—and the requirements are very strict.

Blitz cans must be strong to stand rough treatment—tight to keep out desert sand—proof against jungle damp and salt sea air. When the Army's on the blitz, scout cars often lead the way, dropping emergency rations of gas and oil in blitz cans for the tanks and trucks that follow.

The handle of the blitz can is ingeniously designed for gripping by one man or by two . . . A small touch, perhaps, but

typical of the endless attention to details which our Services of Supply enforce—details that may mark the margin between defeat and victory in a critical battle.

For Today . . .

Rheem makes a whole series of war needs, from Liberty ships to shell casings. Rheem was able to convert to war production quickly because of broad experience with peacetime shipping container problems and a resourceful, flexible production system.

For a New Tomorrow . . .

Rheem's normal output—still partly maintained for war service—includes steel drums, pails, storage tanks and other containers for industrial use; water heaters and other appliances of home utility.

Rheem's job now is victory, but when that hoped-for day arrives, Rheem's war experience and research will bring new comforts and conveniences to America's new and fuller life.



RHEEM MANUFACTURING COMPANY

13 Factories in the United States . . . 2 in Australia • Research and engineering on both coasts • Executive and Sales offices: Rockefeller Center, New York City
Normandy Building, Washington, D. C. • Richmond, California



taking too much or too frequently—might lead to “collapse” or “mental derangement.” Actually FTC’s complaint charges that adequate warnings against misuse of the products do not appear in advertisements, but it has been that agency’s past practice in settling such cases to be satisfied if the warning appears on the label and is referred to in advertisements.

● **Result of Alternative**—By granting the alternative of putting the warnings in either the advertisements or the labeling, FTC indirectly moves over into FDA’s jurisdiction over the latter. When given the alternative, advertisers naturally choose to put the FTC-required warnings on the label, because they do not want to pay for time or space to tell people why they should be careful in taking something.

Shortly after enactment of the Food, Drug, and Cosmetic Act, FDA made a number of seizures of acetanilid-bromide headache compounds, including those of almost all the companies now cited by FTC (BW—Mar.18’39,p29). As a result of the seizures, FDA announced that, based on present scientific knowledge, it would take no further action against headache preparations that contained no more than 2.5 grains of acetanilid and 5 grains of bromide per dose. In addition, FDA wanted the directions to read that no more than two doses should be taken in 24 hours, and the doses should be at least three hours apart.

● **“Suggestions” Bring Action**—FDA also “suggested” some warning statements to appear on the labeling of this type of product. As a result of this, all companies reduced their acetanilid and bromide dosages to FDA requirements and included the precise directions on their labels. In addition, they all prepared warning statements somewhat similar to those “suggested” by FDA, but not precisely the same.

All this happened during 1939 and early 1940, and there has been no further trouble between FDA and the acetanilid-bromide group, which can be taken to mean that FDA was satisfied with the warning statements on the labeling as well as the dosage and directions.

● **Dr. Durrett’s Doing**—In a sense, FTC’s action might be interpreted as implying criticism of FDA for not insisting on stricter warning statements. In any event, proprietary circles believe the FTC action can be traced to Dr. J. J. Durrett, a dyed-in-the-wool drug reformer, who left FDA early in 1941 to become FTC’s medical director.

The companies involved in the complaints are prepared to fight. They indicate they will stand on the warnings now appearing on their labels—warnings to which FDA has not indicated any objection. They are expected to point out that the major difference between

the warnings FTC wants and those on the products now in use of these words—collapse and mental derangement.

● **Complete Denial Likely**—When it comes to the use of these words, the drug companies are expected to contend that even misuse of their products will not bring about such dire results. In addition, they are expected to insist that FTC has no legal jurisdiction over warnings, wherever they might appear.

A test of FTC’s right to require warnings cannot come until the cases have been finally decided by the commission and are appealed to courts. In the meantime, trial examiner hearings will be held on the “merits” of the complaints, and FTC will have to issue orders in the cases.

● **Better Off in Court?**—Here is where drug men think maybe they made their mistake. Under FTC’s administrative-type procedure, the commission issues the complaint, takes the testimony, and makes the decision. Seldom, if ever, does the commission admit it made a mistake in issuing a complaint in a major case—orders invariably follow complaints in big cases. And the jurisdiction of circuit courts to review such orders is limited.

On the other hand, when FDA makes a charge, it must support its contention in a courtroom before either a judge or jury that is less likely to have any preconceived notions about the issues at stake. Thus, proprietary drug men feel that they would be better off, perhaps, if the acetanilid-bromide cases were to be tried before a court, because the scientific evidence they have collected in recent years through studies conducted in several leading eastern universities might be able to turn the tide.

Tin Cans Wanted

WPB’s scrap program is far from overtaxing country’s detinning facilities, but new capacity is already projected.

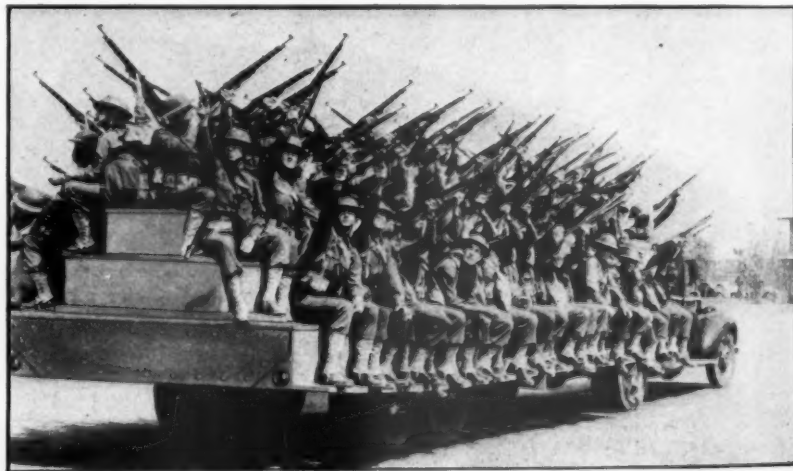
Tin cans have been promoted to the ranks of full-fledged scrap. Formal recognition of that fact was provided by WPB’s order requiring all cities of more than 25,000 population in the 15 northeastern states to set up machinery for tin can collection and segregation.

● **They’re Wanted**—For a long time, general collection of cans was discouraged except in areas near a detinning plant. Now WPB wants them from everywhere; even where collection isn’t compulsory, voluntary programs are welcome.

At current levels, it is estimated, the price that the detinners can pay for cans is enough to cover transportation from any point in the country to the nearest plant. In a few places, such as Florida, it’s touch and go; there might be a slight loss.

● **Formalizing the Program**—The new collection order—an amendment of M-72-a—is more a matter of formalizing the program than of putting compulsion on municipalities to do the collecting. Actually, of the 400 or so cities affected, about 300 have already set up collection systems. Doing so is no particular hardship for a city, may actually make it a little money.

All that the city has to do is to partition off, once a month or so, part of



TROOP TRANSPORT

Latest vehicle idea being tested by the Army is a 30-foot trailer designed for troop transport, built by Utility Trailer Mfg. Co., Los Angeles. The trailer is topped by a three-tier pyramid, step-like on both sides, which

can accommodate 206 men at a time. The transport can be unloaded and men can be dispersed over a 50-foot circle within 10 seconds—a talking point for use in an air-raid area. High-powered truck tractors haul these units, and the entire job rolls on four axles and 14 wheels.

Meet the urgent need to produce
MORE with LESS
 with the "Know-How" of the

Disston Conservation Control Cards contain such data as Typical Troubles and Failure to Achieve Proper Performance; Cause of the Trouble; Correction; and Recommendations for Various Materials to be Cut.



**DISSTON
 CONSERVATION
 CONTROL PLAN**



THE basic principle of good manufacturing practice is getting the very most out of what you have to work with . . . time, tools and materials. Using the best equipment obtainable and keeping it working at maximum efficiency are vital duties today.

The Disston Conservation Control Plan has been devised to meet these urgent wartime demands. The fundamental purpose of the Plan is to help industries turn out *more* and better products—with *less* lost time, *less* tool breakage, *less* waste of essential supplies.

The "Know-How" to do this is contained in Disston Conservation Control Instruction Cards—providing specific information on the most efficient use and care of 34 different types of cutting tools. Many of the nation's leading manufacturers report these cards exceptionally effective in saving tools—in simplifying and multiplying supervision—in speeding training—in making the most productive use of time, effort and equipment.

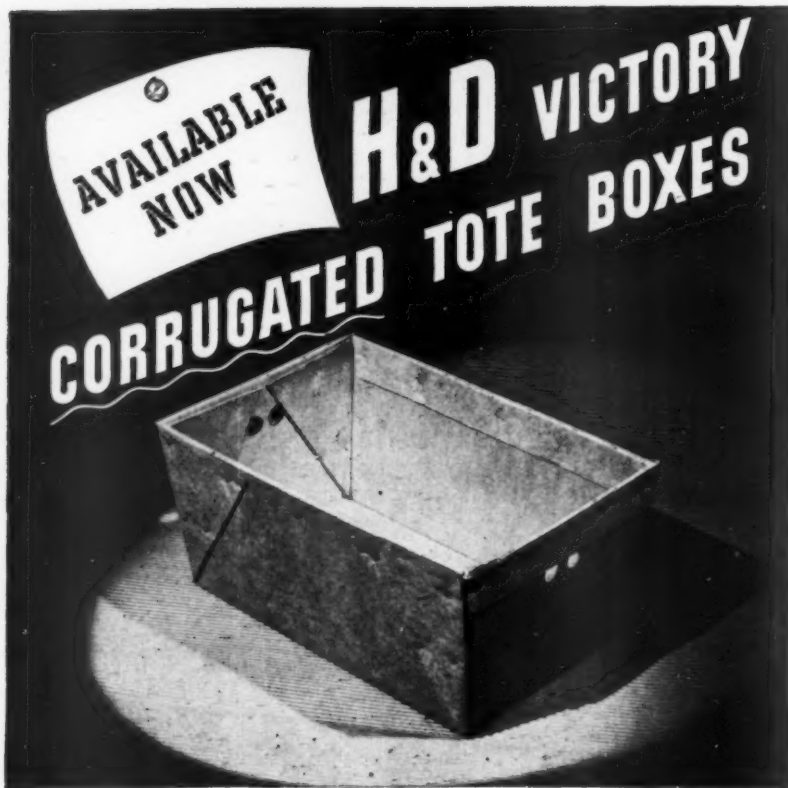
Nearly three-quarters of a million Conservation Control Cards are in service throughout American industry. They are available to you without cost or obligation. For complete information write today to Henry Disston & Sons, Inc., 1028 Tacony, Philadelphia, Pa., U. S. A.

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**GET YOUR
 SCRAP INTO
 THE SCRAP!**





✓ CONSERVE VITAL MATERIALS
✓ SPEED PRODUCTION

Simplify the problem of getting the right parts at the right place at the right time by using H & D corrugated tote boxes. Constructed of non-critical materials, they're ideal for fast, accurate handling of small parts on assembly lines . . . for intra-plant haulage.

They're Economical—Simple fabrication from inexpensive, available corrugated board gives you low first cost.

They're Light Weight—Easier to handle, they help check worker fatigue, reduce costly errors in handling.

They Eliminate Hazards—No sharp, jagged edges to cause injury to workers.

They're Adaptable—They can be used on any number of production line, intra-plant haulage and storage operations.

They Save Storage Space—Delivered set up and nested, or flat for quick assembly, they reduce storage to a minimum.

Almost any manufacturer can speed production with the general utility style tote box illustrated. You'll find the exact style you need among the many different types now manufactured by H & D.



WRITE FOR FREE BULLETIN "TOTE BOXES"

BETTER SEE H&D Authority on Packaging

HINDE & DAUCH 4261 DECATUR STREET, SANDUSKY, OHIO

FACTORIES in Baltimore • Boston • Buffalo • Chicago • Cleveland
Detroit • Gloucester, N. J. • Hoboken • Kansas City • Lenoir, N. C.
Montreal • Muncie • Richmond • St. Louis • Sandusky, Ohio • Toronto.

its rubbish trucks and arrange for separate handling. In return, it saves considerable truck space, because cans that the housewife has flattened have only about one-fifth the bulk of green cans. And the city gets \$13-\$15 per ton from the detinners for the cans. Minneapolis, for instance, figures a profit of \$1,100 on its first collection, \$750 on its second.

• **Rapidly Going Up**—Collections of cans are rising very rapidly. July receipts at the plants amounted to 2,000 tons; August, 4,000; September, 7,000. It is estimated that October receipts will run to 12,000 tons. Collections can still rise a great deal without taxing the capacity of the detinning plants. There are seven established plants—two of Vulcan Detinning Co., three of Metal & Thermit Corp., and one each of Standard Refining Co. and Johnson & Jennings. These have a capacity of 315,000 tons, which will be increased to 385,000 when Vulcan completes an expansion now under way.

In addition, Compressed Steel Corp. has just started a plant at Denver, which will have a capacity of 12,000 to 24,000 tons a year, depending on the success of its new secret process. Several small plants of a few thousand tons' capacity are scattered around the country.

• **Plenty of Room**—These plants, which normally operate on tinplate plant scrap, are now running at a total operation of about 120,000 tons a year, leaving plenty of room for the housewife's contribution.

Moreover, WPB has recommended that the Defense Plant Corp. finance construction of additional plants at Birmingham, Dallas, Los Angeles, and Buffalo. The Birmingham recommendation has now been approved by DPC. It is expected to take about a year and cost about \$5,000,000 to build these plants. Los Angeles Byproduct Co., a firm that now runs a shredding plant on the West Coast, will operate one of these; Vulcan and Metal & Thermit the others. The four plants will have total capacity of about 280,000 tons a year.

• **Six Out of Ten**—Since it is estimated that about 1,000,000 tons of usable cans go into the hands of consumers each year (paint cans, conical-top beer cans, and some other types are not collected), this means that some six out of every ten cans will have to be collected to keep these plants busy.

A controversial point in the program is shredding vs. home preparation of cans. Opinion divides within the industry and in WPB as to whether it is better to have housewives open, clean, and flatten the cans or to send green cans through a shredding plant before they go to the detinners.

• **Pros and Cons**—Proponents of shredding argue that home cleaning is inadequate for optimum detinning, and

a program for construction of 17 shredding plants has been tentatively laid out. Those who have confidence in the housewife argue that the shredding plants are unnecessary, and that home flattening provides a higher capacity in the detinning vats.

So far the program is financially self-supporting and run on a more or less normal commercial basis. Next year there may be a financial problem when cans of electrolytic tinplate with only about a third the tin content start reaching the market. The cans will still be wanted for the sake of the steel scrap. They'll still have to be detinned before they can safely be used as scrap. But detinners will be getting a lower yield of tin and a lower money return.

Planes to Rescue

Returning from far-flung battle fronts, Army and Navy transport commands bring back many critical materials.

Announcement that Army's Air Transport Command is flying strategic goods on return trips to the United States is an old story—because it had been in the Army censor's ice box for a couple of months. It named several items we were dangerously short on at the time.

• **Stuff Had to Be Gathered**—You might think it would be the first thought of the air force transport men—Navy's Air Transport Service is also in on the job—to load up all returning planes. They thought of it all right, but the goods were not available at air stations until an assembly system was worked out by the Bureau of Economic Warfare, which has branches all over the world.

For example, BEW set up a station in the Far East, where scarce metals are assembled from scattered points in China for air transport to the United States. Military transport services have terminals at places where ships and railroads don't go. And in cases of great need, military planes reach places that commercial air lines would ordinarily pass up as unsafe.

• **Several Items Handled**—China National Aviation (Pan American Airways) carries bristles, tungsten, silk, and tin to airports in China from where they are taken to the U. S. by Army or Navy plane. In eight weeks, 220 tons of these items were moved from China to India. Later on, 98 tons of tungsten were flown out in ten days.

Airplanes operating in the Army and Navy cargo services total several hundred. Army took half of the domestic airlines fleet of 350, mostly DC-3's, which were added to its existing fleet of nearly 100, and since then the air-

For PAN AMERICAN, Too



Finnell COMBINATION SCRUBBER

Speeds Floor-Cleaning

Until Finnell brought out the *Combination Scrubber-Rinser-Drier*, it was a seemingly endless job to clean vast-area floors, such as Pan American Airways' hangar floors at LaGuardia Airport. Today, with the largest size *Combination Finnell*, it is possible to clean as much as 8,750 sq. ft. of floor an hour . . . and with one operator! Contrast that—for speed and for the saving of man-power—with former, slower methods using separate equipment for rinsing and drying and requiring several operators. Consider, too, the *importance* of speed in removing hazardous oil and grease from floors, as an aid to safety and to reduce fire liability.

Ask for literature showing the complete range of *Finnell Combination Scrubbers*. See how the right model and size can be job-fitted to your needs. For literature, free floor survey, or consultation, phone or write nearest *Finnell* branch or *Finnell System, Inc.*, 3810 East Street, Elkhart, Indiana.

FINNELL SYSTEM, INC.

Pioneers and Specialists in
FLOOR-MAINTENANCE EQUIPMENT AND SUPPLIES

BRANCHES
IN ALL
PRINCIPAL
CITIES

craft plants have been delivering transport planes at an unrevealed but increasing rate. The transport building program of the Army, through 1944, is for more than 10,000 planes, including a large number of the four-engined type.

Rubber is not as important on the air freight list as you might think. We are drawing upon our stockpile of crude, and surface ships are fast enough for delivery from foreign parts. We are still getting rubber out of places in the East by means the Japanese are powerless to stop.

• **By Air into the Jungles**—Aviation is taking on the job of getting rubber out of South American jungles. Planes are taking crews and supplies into remote camps, from which native spotters and trail cutters reach individual trees.

STREAMLINING AIR CARGO

Strictly for war, but with post war angles, research men in California are trying to increase the loading of plane cargo by 33%. Studies of 100,000 air shipments indicate that air cargo runs as high as 40% excess weight and 5% excess volume, both due to inadequate packaging; that there is a further loading loss of 10%.

The Air Cargo Assn. in Los Angeles, formed recently by aircraft and air transport companies to survey military cargo, finds that clinging to ground-transport methods of packaging and

shipping is the root of the whole problem. The association believes the present 40% loss on tare can be cut to 18%, and the 5% loss through excess volume and 10% loss through wrong loading can be eliminated with total increased efficiency of 33%.

After the war, the modernizing of packaging and shipping methods, to get goods into the air, promises to extend markets in this country and abroad and to bring into the air-shipping range many commodities now deemed too heavy.

The data obtained in the survey will be of prime interest to packaging specialists, for adaptation to new air packages after the war. For the present, the association will make its results available to large shippers confronted with war problems.

Paper Cup Picnic

Free from most of the war worries, this industry cashes in on steadily increased demand for its varied products.

When the Brooklyn Navy Yard siren screams lunch time at 11:30 every morning, shipfitters, electricians, and welders troop down the "lowa's" gangway to get their vitamins—a 40¢ table d'hôte

lunch (hot soup, choice of hot entree salad, dessert, bread and crackers, coffee or milk). And nutrition-conscious war industry (BW—Sep. 12 '42, p. 39) from Bridgeport to Burbank is watching how it's done in the national campaign against the workingman's hot dog stand lunch.

Time-savers, labor-savers, and diet savers in this new experiment in industrial feeding are paper cups and containers, which have gone to war as substitutes for china and glass as well as to fill in for curtailed production of both in the packaging battle.

• **A Significant Boom**—The armed services may still stick to the traditional mess kit, but many big war plants and shipyards have turned to the paper containers for reasons of sanitation and convenience in handling. All this adds up to a boom of significant proportions. Last year, for instance, Lily-Tulip, the trade leader, reported more than a 100% increase in sales over 1941.

Three-shift production is keeping pace reasonably well with demand, and inventories are regarded as adequate, barring such drastic depletion of stock as would result from a large-scale bombing of New York City. (Paper cups and containers by the millions were flown to Hawaii after Pearl Harbor and to London during the air blitz.)

• **Why Demand Soars**—But it doesn't take disaster to make single service dishes essential. WPB has frozen dish washing equipment (M-126), fuel for hot water is scarce and the alternative sterilizer, chlorine, is unavailable (M-19). Storage space for china and glass in war plants is limited or non-existent, and so is labor for serving food and washing dishes.

It was the labor shortage in the strategic Southern California area that forced the Los Angeles General Hospital to replace its 10,000 dishes with paper bowls, cups, etc., of which it uses 30,000 daily. Used dishes are burned for fuel, and 70 persons are released for aircraft labor.

• **Saving Man-Hours**—Labor is conserved, too, in the man-hours of those who eat in the paper cup type of cafeteria. In open air construction, 10 to 30 minutes per man are saved, and Brooklyn Navy Yard shop workers operating in 8-hour shifts are fed in 15 minutes, although waterfront workers get 45.

By virtue of tapered construction both paper cups and containers have the characteristic of nesting, which enables them to slip right through the nation's transportation bottleneck. One thousand paper cups fit into 2 sq. ft. while a corresponding amount of china and glassware would fill the whole back end of a truck. A single boxcar holds 6,000,000 to 8,000,000 containers. The industry claims that if its entire production were shipped in boxcars, only 5,000



The sandwich-coffee-pie routine of the war workers' lunch is disappearing under competition from hot balanced meals served in paper containers fitted

in paper trays. Scene: Brooklyn Navy Yard where a "lunch hour" is from 15 to 45 minutes. Hundreds of other plants have also turned to paper cups.

This picture, by LIFE's Margaret Bourke-White, was taken in a Russian farmhouse near the Black Sea on the fateful day of June 22, 1941. The radio was bringing the news that Britain would stand by Russia against the German attack begun that morning. You know the look on these faces; you have seen it before your own radio on a day of crisis.

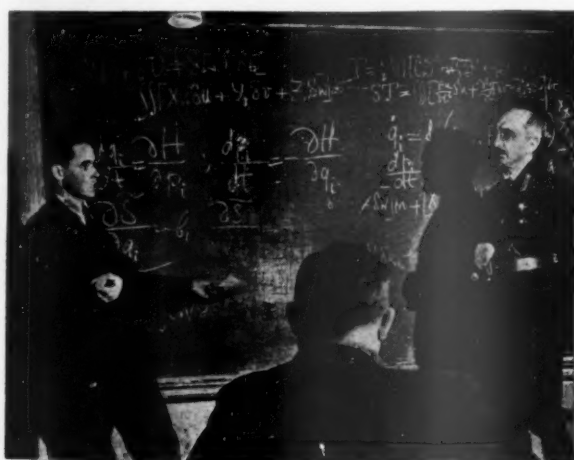


this honest understanding of unhaloed, unhorned Russia and should put aside any dislike for the past history of this nation whose present is linked so closely to ours. For Hitler is not unaware that the subject of Russia presents fertile ground for the seeds of distrust and suspicion.

And Hitler knows that nothing could help him more than to have distrust or misunderstanding about *any*

Allied nation permeate our thinking and thus interfere disastrously in our successful conduct of this global and necessarily *co-operative* war.

Each week LIFE gives a clear, calm understanding of the Russians—as well as of our other Allies—to more than 23 million civilian readers, and to 63% of the men in our armed forces.



Eagerly exploring the new world of learning, young people crowd Russian classrooms. Russia's dictatorship, though stultifying to free opinion, does not seem to have the blighting effect of the German tyranny on art and culture, as witness Shostakovich's newly composed, tremendous Seventh Symphony.

LIFE

**"America's Most Potent
Editorial Force"**

**More than 4 million copies sold each week!
Read by more than 23 million people! Bought
by more people, read by more people than
any other weekly magazine in the history of
publishing!**

or 1% of the total available space would be needed to hold the paper containers. • **Without Conversion**—For all its being geared to practically every need of war production, the cup and container industry underwent no conversion, but found itself ready-made for the battle. No essential raw materials are used—only paper, paraffin wax, and small amounts of adhesive and printer's ink. Paraffin allocation is not imminent now, but should it come, the trade could substitute uncoated cups in many cases.

Furthermore, no essential labor is involved. The industry's 5,000 employees are unskilled women except for maintenance men, who account for less than 10% of the payroll. And machines, now running three shifts instead of one, have no possible use in other types of war production.

Although representing an industry producing in billions of units, the Cup

and Container Institute has never had an index of production. It presented its first statistics this year when it announced output of 2,000,000,000 "manufacturer's pack" containers for dairy, meat, and other products.

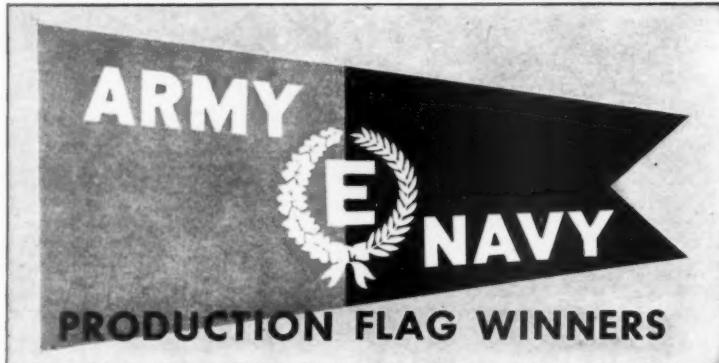
Uncalculated is the boom in souffle cups, the tiny paper containers in which coffee shops serve jam or marmalade with morning muffins. Sugar rationing brought them to the fore as a device for uniform commercial servings of granulated sugar. It's just one of many specialties the war has thrown into mass production, smiles the trade.

• **Selling the Sanitary Virtues**—With the bonanza of war business which the industry now enjoys, it might seem that plugging for new business was less in order than explaining to Mrs. America why there may not in the future be enough paper cups for picnic lunches and church suppers. But the Cup and

M AWARDS ANNOUNCED

In addition to Army-Navy E awards, the Maritime Commission also awards pennants for outstanding production achievements. The following awards have just been made:

Alabama Drydock & Shipbuilding Co., Mobile, Ala.
A. P. Green Fire Brick Co., Mexico, Mo.
Homestead Valve Manufacturing Co., Inc., Coraopolis, Pa.
Houston Shipbuilding Corp., Houston, Tex.
Linde Air Products Co., Inc., New York, N. Y.
Minneapolis-Moline Power Implement Co., Minneapolis, Minn.
Russell & Erwin Manufacturing Co., New Britain, Conn.
Security Engineering Co., Inc., Whittier, Cal.
Whitin Machine Works, Whitinsville, Mass.



Allegheny Ludlum Steel Corp., (Two plants)
American Optical Co., Southbridge, Mass.
American Welding Co., Carbondale, Pa.
Atlas Press Co., Kalamazoo, Mich.
The Aviation Corp., Williamsport, Pa.
Brunner Manufacturing Co., Utica, N. Y.
Century Machine Co., Cincinnati, O.
Claroast Manufacturing Co., Brooklyn, N. Y.
Colt's Patent Fire Arms Manufacturing Co., (Three plants)
Connecticut Telephone & Electric Corp., Meriden, Conn.
Divine Brothers Co., Utica, N. Y.
Fairchild Aviation Corp., Jamaica, N. Y.
Folmer Graffex Corp., Rochester, N. Y.
General Cable Corp., (Two plants)
High Standard Manufacturing Co., New Haven, Conn.
F. L. Jacobs Co., Dearborn, Mich.
Jacobson & Co., New York, N. Y.
Jessop Steel Co., Washington, Pa.

Kellogg Co., Battle Creek, Mich.
The C. M. Kemp Manufacturing Co., Baltimore, Md.
Kennecott Wire & Cable Co., Phillipsdale, R. I.
Kraft Cheese Co., (Three plants)
R. Krasberg & Sons Manufacturing Co., Chicago, Ill.
Lake State Products Inc., Jackson, Mich.
Lapp Insulator Co., Le Roy, N. Y.
Martin-Schwartz, Inc., Salisbury, Md.
New Process Gear Co., Syracuse, N. Y.
Oneida Ltd., Oneida, N. Y.
Otis Elevator Co., Harrison, N. J.
Pillsbury Flour Mills Co., Springfield, Ill.
Read & Lovett Manufacturing Co., Weatherly, Pa.
Remington Arms Co., Inc., Ilion, N. Y.
Ritter Co., Inc., Rochester, N. Y.
Ross Gear & Tool Co., Lafayette, Ind.
Salvay Process Co., Hopewell, Va.
Savage Arms Corp., Chicopee Falls, Mass.

Schauer Machine Co., Cincinnati, O.
A. Schrader's Son, Brooklyn, N. Y.
Scott Aviation Corp., Lancaster, N. Y.
Semet-Solvay Co., Solvay, N. Y.
Solar Aircraft Co., San Diego, Cal.
Spicer Manufacturing Corp., Toledo, O.
Standard Gage Co., Inc., Poughkeepsie, N. Y.
Streeter, Hackney & Co., Johnstown, N. Y.
Summerill Tubing Co., Bridgeport, Penn.
Sunnen Productions Co., St. Louis, Mo.
Supreme Knitting Machine Co., Brooklyn, N. Y.
Switlik Parachute Co., Trenton, N. J.
Titanine, Inc., Union, N. J.
E. H. Titchner & Co., Binghamton, N. Y.
Titeflex Metal Hose Co., Newark, N. J.
S. S. White Dental Manufacturing Co., Staten Island, N. Y.
Wheeling Corrugating Co., Wheeling, W. Va.
The John Wood Manufacturing Co., Muskegon, Mich.
York-Hoover Body Corp., York, Pa.

(Earlier winners of the Army-Navy award for excellence in production will be found in previous issues of BUSINESS WEEK.)

Container Institute, composed of 15 manufacturers, figures that the present war period is as good a time as any to sell the solid sanitary virtues of the product.

That's the reason for the present advertising campaign placed by Young & Rubicam in two national magazines and 14 newspapers, which tells how paper cups can help prevent another scourge in this war like the flu epidemic of 1918.

BEST USE OF POSTERS

The War Production Board has just issued advisory instructions for labor-management plant committees on "How to Get Results in Using Posters." It is a product of experience with visual displays in a cross-section of war plants covered by the production drive. For handling posters it prescribes:

- (1) Pick a good spot and stick to it. People will get accustomed to looking in this place for new posters.
- (2) Put the poster where it won't be soiled.
- (3) Above eye level is where posters are seen best.
- (4) Expected locations are best. Unusual positions attract attention to placing, not to the poster.
- (5) Motion is a decided asset. Posters on doors that are frequently opened and closed, delivery trucks, giant cranes and other machinery, are endowed with life that still posters do not have.
- (6) Use enough posters. Posters rationed less than one for each 100 workmen on a shift are too thinly spread to be wholly effective.
- (7) Put them up securely; gummed tape will usually do for inside locations, but outside you may have to use all-over pasting or glass covers.

Wooden Springs

Tests compare them well with metal, but cost factor raises doubts whether they can compete after the war.

Furniture manufacturers denied metal springs by WPB Limitation Order L-49, effective Nov. 1, see a distant ray of hope in wooden springs for chairs, sofas, studio couches, box springs, and mattresses, now being tested by various suppliers.

Like Archer's Bow—A New England manufacturer has a wooden spring embodying the principle of the archer's bow. It relies for its bounce on the natural resiliency of wood and consists of several pairs of wooden strips. In each pair, the strips are steam-bent in opposite (resisting) arcs and joined at the ends to form an ellipse.

Crosswise, the pairs of arcs are held together by a resilient plastic fabric. The pressure of sitting depresses the arcs, but when pressure is released they return to their elliptical shape. Breakage may occur during the process of steam bending the strips, but once bent, the springs are said to be practically unbreakable.

Now the Victory Spring—Another promising wooden spring is the Victory spring (see illustrations), a model of which was shown last week by the School of Design in Chicago. Buyers saw an experimental model displayed at the Seng Co., big furniture hard-

ware outfit, at last July's Chicago furniture show. They came to scoff but remained to sit in comfortable approval.

The name stems not merely from the war, but also from the basic "V" structure of the spring. Strips of veneer are hinged at alternate ends to form successive V's, folded upon each other in zigzag fashion. At the apex of each V, the strips are held apart by wooden wedges; the amount of elasticity in the spring is predetermined by the size and shape of the wedge, as well as the size and composition of the strips. The pressure ranges from less than 1 lb. for the cushion-type spring to as much as 50 lb. for heavy-furniture springs.

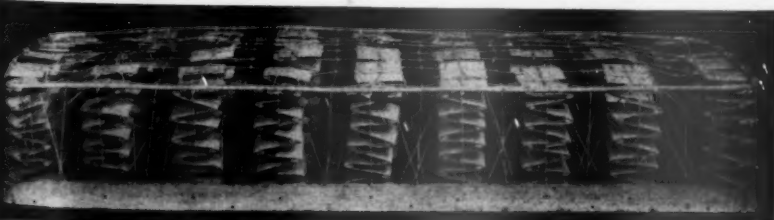
• **Compared with Metal**—L. Moholy-Nagy, director of the School of Design in Chicago, claims that his wooden springs can simulate any metal spring of any compression weight. Because Moholy-Nagy was a member of the famous Bauhaus school of Germany, whence originated tubular metal furniture, manufacturers are inclined to listen when he sounds off.

Tests, which in a few hours undertook to subject Victory springs to the equivalent of ten years' wear, indicate them to be fully as durable as metal springs, and equally satisfactory in performance. Like metal springs, they lose some of their flexibility from fatigue, but unlike metal springs, they recover it.

• **Cost Factor**—Victory springs can be made from any hard wood with a straight grain. The veneer is sealed to retain its moisture content and protect it from changes of humidity. It is also rendered verminproof and moistureproof. Furniture made with wooden springs is not more than 1% or 2% heavier than metal-spring furniture.

But the rub comes in scaling down manufacturing costs to compete with metal-spring furniture still on the market. The cost of metal springs for an ordinary chair is usually about 25¢. The best the boys have achieved thus

Metal springs are out for the duration, but wooden springs may bridge the gap. The wooden Victory spring conceived in Chicago's School of Design is built of veneer strips hinged at alternate ends and folded over wedges in zigzag fashion (left). The assembled springs (below) retained buoyancy after stiff laboratory trials.



Is it Sentiment or Sound Business Sense that has Prompted so many Employers to adopt The Protected Pay Envelope Plan?

Today, fully 75% of America's big concerns are giving their employees the protection and benefits afforded by some form of group insurance. Is that because management is today more fully aware of its obligation to its most valuable of all assets—the employee? Partly, we like to believe. But there's no denying that improved morale, loyalty and efficiency help pay dividends—that the happy worker—the secure worker—is worth more to any employer—not just theoretically but in dollars, saved and earned. ¶ We know, because of our experience with leading manufacturers and service organizations from coast to coast. These firms have installed Connecticut General's modern, all-inclusive type of group insurance, which goes so far in promoting the security and welfare of employees—THE PROTECTED PAY ENVELOPE PLAN.

May we, without obligation, send you a booklet explaining the many advantages of this Plan—with statements by employers telling what it has done for them?



THE PROTECTED PAY ENVELOPE
CONNECTICUT GENERAL
 LIFE INSURANCE Company
 HARTFORD, CONNECTICUT



The designing engineers of a power shovel increased the service life of bronze bushings used with track rollers 50% or more when they standardized on bronze bushings made from Ampco alloys. Formerly, these bushings were made of ordinary bronze, but after considerable experience under all types of field service, Ampco-made bronzes were found more desirable.

Since the parts in power shovels are subject to grit, dust, and abrasive particles in normal operation, each part must stand up under these severe conditions. The wear-resistant characteristics of Ampco alloys, combined with great strength and hardness, make them especially desirable in this service.

Full information sent on request.

AMP CO METAL, INC.

DEPARTMENT BW-10

MILWAUKEE, WISCONSIN

**AMP CO
METAL**



THE METAL WITHOUT AN EQUAL

far in wooden springs for the same chair is about 40¢ each, or \$5.60 per chair. A simplification of the Victory spring, reducing it to Z form, is being worked out jointly by Seng and Moholy-Nagy, and is expected to reduce manufacturing costs.

• **Will Influence Design**—Wooden springs can be used with current furniture styles without the necessity of redesigning. Nevertheless, they will probably have some effect on furniture design by bringing about greater standardization of styles and sizes, according to Seng.

Despite rosy predictions to the contrary and regardless of their intrinsic merit, Seng is sure that wooden springs are strictly a duration product. Unless someone bobs up with a design that permits production economies which as yet seems improbable, the cost differential is too great to enable wood to compete with wire, when metal again becomes available for civilian use.

Lumber in a Jam

Faced with shortage of 6,000,000,000 b. ft., U. S. scans means of diverting orders to portable sawmills.

WPB has been tearing its hair about an impending lumber shortage of 6,000,000,000 b. ft. for the next 12 months. Requirements are officially estimated as 38,000,000,000 b. ft., supplies 32,000,000,000. Hence the agitation to substitute more plentiful materials, such as brick, clay, and concrete products.

• **New Emphasis**—Government authorities have been talking less about increasing total output. It is recognized that within wartime limitations, the big lumber outfits are getting out all the footage possible.

As a matter of fact, despite labor shortages, total production this year is not significantly lower than last. The real rub of the problem is that in the first nine months shipments have exceeded production by 13%, and even at this high rate have fallen 6% short of new orders. The net result is that since the beginning of the year stocks on hand have diminished by 24%, while the backlog of unfilled orders has increased 42%.

Many a federal agency recognizes the most promising approach as finding a way to keep the portable and small-scale sawmills working full time. In the Great Lakes states, portables operate about 30 days a year. In the South and East the little fellows characteristically operate 75 to 100 days a year.

• **Portables Written Off**—Best estimate is that there are 3,000 portable saw rigs in Wisconsin, Minnesota, and Michi-

... with average capacity of around 100 b. ft. per day, or 15,000,000,000 ft. per day in the aggregate. But they are written off by practical lumbermen for commercial supply.

The small Southern and Eastern mills are something else. U. S. Forest Products Laboratory estimates that getting these rigs to work six days a week would increase total U. S. lumber output by 25% to 30%.

Price Ceilings—What has stopped the growth of many a backwoods portable is federal price control. Office of Price Administration ceilings have tended to wash out the wholesalers who used to buy and market the production of most of the small Southern mills. Because the wholesaler cannot handle the mill's output, the mill owner soon runs out of money and quits, even though his product may be desperately needed.

Hard hit are the small mills in the Gulf area which produce sheathing and framing materials, such as 2x4's and 2x6's, the items in most urgent demand. The portables' output could help greatly right now. But ceilings have put many a small mill practically out of business. The little mill man is in no position to bid on government contracts, and his capacity is thus lost to the war program. WPA is working on this problem, is expected soon to adjust cost allowances to permit higher wages to labor and a cut in the wholesaler.

Many mills in the Southeast have survived by selling hardwood to furniture manufacturers nearby. The furniture factories are tapering off, and this in turn forces the sawmills to slow down or go off.

Cut Ship Timbers—These are the very mills best situated to provide such critical materials as ship timbers, which must be cut to order. Much of this must come from big white oak trees that are in farm woodlots, not in commercial forests. The portables can move right up to these big trees, thus freeing the bigger mills of these tailor-made jobs. But even the little fellows cannot always select timber to order at prevailing ceiling prices.

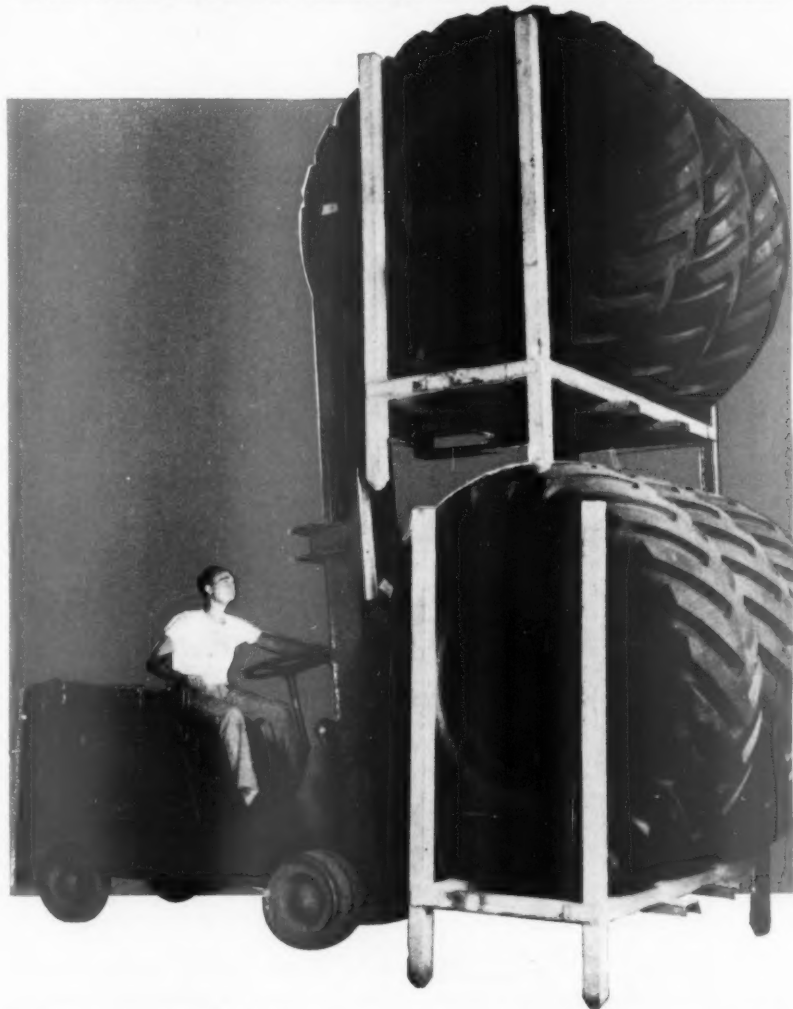
One quiet effort to boost production by the small mills is a booklet, "Small Sawmills—to Keep 'Em Rolling," published by the Forest Products Laboratory. This is circulated among practical foresters in state and federal service, to bring them up to date on methods and needs. They then get into the woods and show the small operators how to do it.

Help from Washington—But also the government is setting up centralized purchasing agencies to work in this field. The Navy's Bureau of Ships and the Army Engineers are reported the prime movers. The Procurement Agency will try to anticipate the needs of Army, Navy, and Maritime Commission, and place orders with small mills.

All Production Action Depends on Movement of Materials . . . ONE OF THE QUICKEST, EASIEST WAYS

TO STEP-UP PRODUCTION EFFICIENCY, GAIN TIME, CUT COSTS,

SAVE SPACE IS TO SYNCHRONIZE ALL HANDLING OPERATIONS



*** Towmotor, the "one man gang," correlates man-power, materials and machines for maximum efficiency of movement. That's why every Towmotor manufactured today goes to Army, Navy, or war production plants. Write today for a copy of "The Inside Story" and learn how Towmotor fits into your plans now and for post-war production. TOWMOTOR COMPANY, 1221 East 152nd Street, Cleveland, Ohio

TOWMOTOR



THE 24-HOUR ONE-MAN-GANG



★ NAVY ★

Water supply tank for a flying field—concrete saved tons of steel.

CONCRETE is serving and conserving

Without sacrificing essentials, concrete is helping complete the war construction job with thousands of tons less

steel, innumerable ton-miles less transportation.

Rugged, durable, hazard-resistant buildings take a minimum of steel when concrete is used. Many structures such as pavements and floors on grade need no steel.

Freighting and trucking of construction materials to the job are minimized with concrete, since the bulk of material is usually found locally.

Time is saved with concrete by simple construction methods using local labor.

To help get the maximum service which concrete can render, the assistance of our technical staff is available to designers and builders of all types of war construction.



★ ARMY ★

Runways for heavily loaded planes—concrete provides the needed strength and stamina with minimum materials; steel seldom needed.

PORTLAND CEMENT ASSOCIATION

Dept. 10e-12 • 33 W. Grand Ave., Chicago, Ill.



★ FARMS ★

Sanitary feeding floors, where hogs fatten quicker with less feed—one of many productive farm uses of concrete.



★ FACTORIES ★

Concrete's fire resistance and strength protect vital industries.

★ BUY WAR SAVINGS BONDS ★

Wood at War

Accepted widely in place of steel, lumber now gets a chance to prove its mettle in the field of plastics.

Only six months ago, U. S. war agencies were eagerly hunting places where wood could be used to release steel. So successfully did they search that today wood is scarce and getting scarcer. The shortage, estimated for the coming year at 6 billion b.ft., quickly licked up most of the 5 billion b.ft. in manufacturers' stockpiles, led to freezing dealers' stocks.

• **Restrictions Seen**—Speaking before a recent lumbermen's convention, Carlisle P. Winslow, director of the U. S. Forest Products Laboratory, fountainhead of American knowledge of wood, wood products, and their derivatives, predicted that "before long the manufacture of additional hundreds of wooden articles in common use today will be sharply restricted or denied altogether."

Because of the lumber scarcity, war agencies are doing their utmost to substitute more plentiful materials for wood—often where wood only a few months ago replaced steel. Recent releases by WPB urge using brick, tile, gypsum board, concrete products, and glass instead of wood for industrial jobs and even for admittedly temporary construction. Paper and fiber products also have been suggested as substitutes.

• **Research Broadened**—The laboratory has been seeking, since long before last December, means of breaking critical bottlenecks in supplies of materials for war jobs. Now it is using more researchers. Because F.P.L. is 100% on war problems, its attitude toward publicizing its discoveries necessarily has changed. Specific information about most of its findings is now restricted.

Recently the laboratory has released a few general facts about its progress in helping stretch the utility of available wood by new processes and developing substitutes. As an indication of the materials that will be available after the war, the laboratory's new data are summarized below. The laboratory cautions, however, that, with respect to processes having military importance, details beyond these can be released only to manufacturers and processors authorized by war agencies.

• **(1) Paper Base Plastic**—A promising new development is an improved paper base plastic which McDonnell Aircraft Corp. is using experimentally for aircraft parts including wing ribs, wing tip skins, and control surfaces.

The airplane industry faced a critical shortage of lightweight metals, and manufacturers have been hot after engineering data on plywood, have been

...iving these materials increasingly.
...the limits on plywood supply are
...ight.

The new paper base plastic promises
...supplement plywood in many aircraft
...lications, perhaps also some light
...als. Its properties give promise for
...ine uses ranging from small boats to
...e cargo vessels and flying boats.

Experimental data indicate that the
...stic equals aluminum in tensile
...ength on a weight basis, has double
...tensile strength of conventional
...er laminated plastics. It can be
...ided to desired shapes at temper-
...ures and pressures and on equipment
... used for making plywood. It is re-
...sistant to moisture and remains stable at
...h high and low temperatures. It is
...re resistant to scratching and denting
...an aluminum. Its surface is smooth,
...quires no special finishes or coatings.
...ests indicate that when pierced by
...llets it does not splinter, tear, or
...ver out. Details of its manufacture
...supersecret for the duration.

(2) Wood Plastic—The laboratory has
...veloped from sawdust or other proc-
...ed wood waste an acid-hydrolyzed
...stic filler for molding a black plastic
...timated cost 3-4¢ per lb.) useful in
...oderately stressed articles. Because of
...light weight and high acid resistance,
...is material seems destined for use in
...orage battery boxes for military vehi-
...s and naval units.

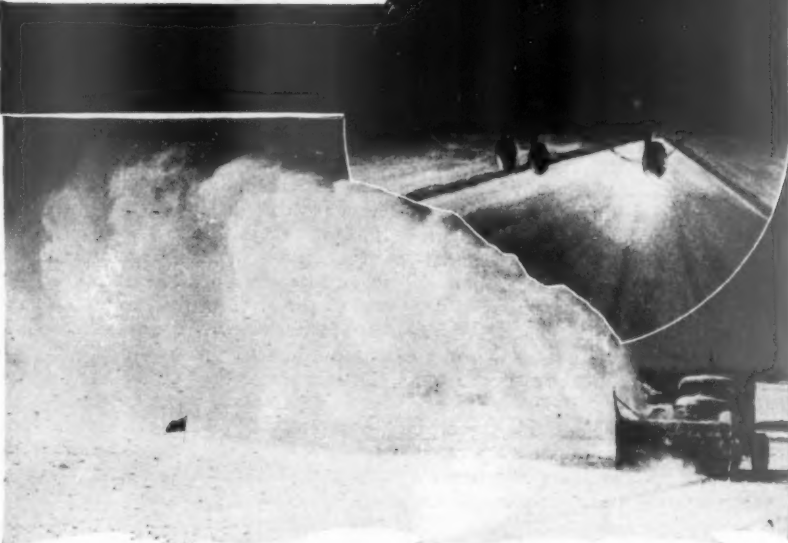
Another material is a resin-impreg-
...ted hydrolyzed-wood sheet which can
...laminated to form under heat and
...essure, with double curvature if de-
...ed. This has apparent possibilities for
...oderately stressed parts for airplanes
...d gliders. This plastic requires up to
...% less critical war-restricted resins
...an do the general-purpose phenolics
...ng wood flour filler.

(3) Impreg & Compreg—Treating ve-
...er with a water-soluble mix of resin-
...ming chemicals to impregnate the
...od fiber walls, and curing the de-
...sited resin with heat, produces a ma-
...rial of high antimoisture, antishrink
...alities that the laboratory calls "Im-
...eg."

Presence of the resin within the cell
...lls permits compressing the wood
...der pressures lower than that required
... untreated wood. Uncured resin-
...ated wood can be compressed with
...at and bonded with the infused resin;
...reatly increased density, hardness, and
...istance to moisture, shrinking, and
...elling result. The modified wood thus
...duced is "Compreg." By varying the
...mber of plies in a given compreg
...ssembly, variations in longitudinal
...ength and density of the product can
...chieved. Hard, self-glossed layers
...compreg can be added to unpressed
...res of impreg in one operation. This
...duct can be built up into thick sec-
...s and readily molded.

The material started out to be a dur-

A SAFE LANDING Tonight



ISTRUMENTS can find the airport in the dark. Instru-
ments can put the ship on the ground—but instruments won't
leave a firm, clean, winter runway.

From Alaska to Nova Scotia—from Seattle to New York
—wherever that Saboteur Winter blasts the airport, Snogo
is making winter flying safer.

Snogo is the fastest known method of removing or load-
ing snow. Snogo picks the snow up and throws it into the
unused areas of the field or packs it tightly into trucks for
complete removal. When Snogo gets through, the job is
done until the next snowfall — no costly rehandling — no
packed layer to freeze and thaw into dangerous ruts and
soft spots—no slush to be picked up and freeze in wheel
pants or carry up into wheel wells.

Someday a peace treaty is going to be signed. Then com-
mercial and private flying will come into its own and flying
will be truly an all-year business. Winter traffic will be as
heavy as summer traffic. When that time comes traveler
and transport company alike should protest the delay and
losses caused by snow. Traveler and transport company alike
should encourage the maintenance of winter schedules with
greater winter safety for costly ships and valuable
lives. *Let Snogo keep the runways clear and
keep 'em flying in any winter weather!*

KLAUER MANUFACTURING CO.
Dubuque • Iowa



**POSITIVELY
GUARANTEED**
*to handle any snow
conditions that will ever
occur on any airport!*

SNOGO

*For
Complete
Snow
Removal*

able nonshrink plywood for skin surfaces for low-cost housing. It developed as not low enough in cost. Now it is used 100% for war materials. The process and its modifications have recently come into use in the production of molded ground-test and flight propellers, carved propellers, airplane landing wheels, airplane semistructural skin surface parts, and other plane fittings. Also, for bag-molded electrical control housings for torpedo boats. Other progress in the treatment of plywood involves new glues and finishes. Especially promising are paints that prevent the spread of fire.

• (4) **Plasticized Wood**—In experimenting with seasoning, the laboratory found that oak, soaked in a concentrated solution of urea and then dried, became plastic and capable of being bent, twisted, and compressed in dry condition at about the temperature of boiling water. At or above this temperature, the wood retains its plasticity. When cooled, it resumes its normal hardness and rigidity, but retains the altered shape unless reheated.

Wood chips or sawdust impregnated with urea can be compressed at elevated temperatures and pressures to a density approaching that of basic wood fiber. The natural lignin in the chips or sawdust combines with urea to form a material of true thermoplastic properties.

A modification of this process, involving the use of a buffered urea-formaldehyde solution, produces a synthetic resin within the wood. Under proper control, this results in a thermosetting material with increased hardness, and with reduced tendency to pick up water, hence reduced tendency to swell and shrink.

This set of processes is useful for other applications besides producing a plastic and bentwood. Applied to birch, it produces an inexpensive material as good for loom shuttles as dogwood that sells for \$1 per b.ft. Applied to spruce, maple, and birch bobbins, it greatly increases service life and does away with the need for metal ferrules.

• (5) **Seasoning Speed-up**—A bottleneck in lumber supply is the industry's drying capacity. The laboratory has developed accelerated seasoning methods that include conventional kiln drying and "chemical seasoning," and is investigating electrostatic drying—first cousin to medical diathermy or melting steel by high frequency induction.

This work has already reduced drying time for airplane spruce by 50% without increase in "degrade;" maple blanks for Russian lend-lease shoe lasts from 60 days to 35 days; walnut gunstock blanks from 60 days or more, to 28 days.

For gunstocks, experimentation has produced characteristics claimed approximately equivalent to black walnut, with Appalachian black cherry—of which species the supply is probably about as great as the total supply of black walnut available in the U.S.

How Army Is Clad

Operations of Philadelphia Quartermaster Depot yield new techniques and new government relationship with industry.

The legend that Army uniforms never really fit does not belong to this war—not if the Philadelphia Quartermaster Depot has anything to say about it. And the depot, known to supply a custom-tailored outfit for an odd-sized private within 24 hours, is saying plenty.

• **A Supermanufacturer**—In fact, the Philadelphia depot—a supermanufacturer in its own right—is making its influence felt in a way that spells: (1) new techniques for the makers of cloth and clothing, (2) a new type of work-day relationship between government and business.

Supervising the evolution of the Army's mammoth wardrobe from sheep (or cotton field) to final pressing, this military workshop, recently revamped at a cost of about \$14,500,000, is actually 100 acres of oiled efficiency. Floors, even in the messiest cutting sections, are clean as a ballroom floor. The depot, which now has about 12,000 employees, has increased its volume 300% while increasing its personnel by 50%.

• **By Example**—Nothing is demanded of the private manufacturer that the depot isn't willing to do itself. For instance, contractors working with cloth supplied by the Army are supposed to return every inch of scrap for reprocess-

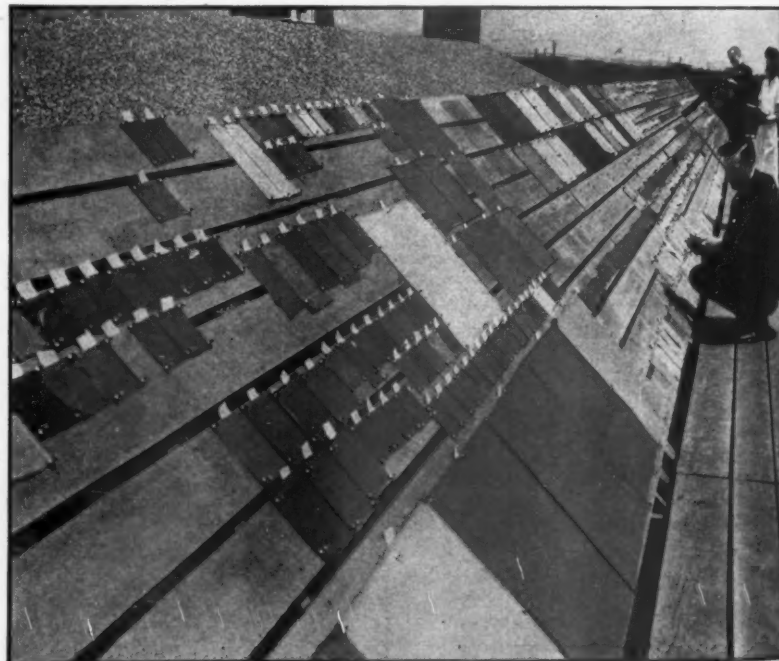


Rainstorm in a pan. In this test Army fabrics are rated according to their water-repellency. Effect of laundering and dry cleaning is carefully gaged.

ing. In its own mill, the depot sets an example by picking up even the lint.

No supplier can continue to do business with this agency without meeting its exacting standards. A careless garment maker with too many rejects will soon find a field agent in his office, sent to examine machinery and methods. If hints fail, the next step is to call the manufacturer to the depot to see how the Army itself does the job.

• **Up to the Minute**—The depot's own garment factory is an eye-opener for the average big clothing man and a wonder-



The roof test is one of many conducted by the laboratory of the Philadelphia Quartermaster Depot. Here cloth samples are exposed to sun and atmosphere.

BEFORE THE *Crucible* CRACKS A MILLION GALLONS

WHEN the Army orders a million gallons of gas, and the Navy a million more, in the plants that produce this vital, high octane fuel, *Instruments by Brown* with their "moving fingers" report every step of the all important processes necessary to produce it. Likewise — *Controls by Minneapolis-Honeywell* maintain uniform, effective atmospheres in plant and office, safeguarding product and employee alike. This *Double Control Service* is available to manufacturers, regardless of the nature of their product or the size of their operation. Those engaged in war production, or planning for it, will find the combined experience of Brown and M-H engineers a valuable aid in preparing for efficient, all out production. Address Minneapolis-Honeywell Regulator Company, Minneapolis, Minnesota, or Toronto, Ont., Canada, or its subsidiary, Brown Instrument Co., Philadelphia, Penna;

Controls
ARE VITAL
TO THE CRUCIBLE
OF FREEDOM

Instruments by **BROWN** *and*
Controls by **MINNEAPOLIS-HONEYWELL**
FOR THE INDUSTRIES



**Government has first call on
READING-PRATT & CADY VALVES**

★ No man can face a more momentous decision than the one which requires him to forget his own immediate personal welfare. Members of the armed forces make such decisions daily. So must we who are far back of the battle lines. . . . It has not been easy to tell our old friends that for the time being we can only supply Reading-Pratt & Cady valves according to priorities and the needs of the government. But the fair and considerate response to that message has again demonstrated the willingness of American industry to adapt itself cheerfully to war conditions. . . . As individuals, as business organizations, as a nation we now tread the Victory road. . . .

Reading-Pratt & Cady Valves are among the 137 products we build for Industry, Agriculture and Transportation, which are essential in peace, vital in war.

**AMERICAN CHAIN & CABLE
COMPANY, INC. • BRIDGEPORT, CONNECTICUT**

In Canada—Dominion Chain Company, Ltd. • In England—The Parsons Chain Company, Ltd., and British Wire Products, Ltd.
American Chain, American Cable Wire Rope and Aircraft Controls, Campbell Cutting Machines, Ford Chain Blocks, Hazard Wire Rope, Manley Garage Equipment, Owen Springs, Page Fence and Welding Wire, Reading Castings, Reading-Pratt & Cady Valves, Wright Hoists and Cranes



land for the little one. There the visitor will find about 5,000 employees busy on every sort of Army garment from fatigue hats to swank officers' uniforms. Up-to-the-minute methods, some representing years of research, are used to avoid waste and maintain speed.

Officers guide the visiting manufacturer to the operations in which he is most interested. He sits, watches, asks questions, and gets all the answers. This shop, however, is more than an educational clinic. It is a pilot plant, a cost yardstick, and a flexible emergency unit wherewith the Army rescues itself when contractors fail to deliver or various other unpredictable factors dam the flow of needed goods.

• **Ideas Are Shared**—With utility and style setting the pace, every effort is bent toward savings in time, labor, and material, and the ideas are passed on freely to busy private contractors. Plans of high-priced designers are upset without a qualm if a better way can be found. One recent shortcut had to do with sport shirts. The depot's men wondered why those of Army issue had to have front panels. They turned out a batch with the panels merely lapped within and battened by buttonholes. Since several operations are saved, the front panel appears doomed.

Once established, patterns stay put until an entire new design is ordered, but processing methods may change daily. A bias cut may replace a straight, or there may be a new variation in hemming or seaming—anything that effects an economy.

• **Enlarged Laboratory**—Research activities of the Philadelphia Quartermaster Depot center in a newly enlarged laboratory, probably the most complete testing ground for textiles in the world. This laboratory may be regarded as the starting point of depot operations. Faulty material doesn't get to first base.

Peculiarly enough, one of the first major tests, the checking of wool grade, is performed with the human eye, a micro-measuring projector being used only in cases of extreme doubt. The graders seldom miss, despite the burden placed upon them by the depot's ever-mounting wool stockpile (about 1,000,000,000 lb. by the year end).

• **Shade and Light**—Wool that has been dyed, blended, and woven into cloth samples gets a workout in the shade rooms. Then, after being matched against an official sample, it is broiled in the sun for several days, then held against the sample again. (Special testing instruments called fade-ometers are used to reduce the time of exposure in determining colorfastness.)

Another test involves the water-soaking, drying, and baking under arc lamps of a small swatch that has been dabbed with chemical perspiration, yanked in a tensile strength tester, and ground against the rollers of a wear-test ma-

A Word for Tomorrow's World— "ELECTRONICS"

"Electronic" is not a new word. As an adjective, it has been in the dictionary for some time. But it is meaningless to most people. If they know the word, it is in connection with fantastic experiments, associated with electrical magic and the dreamer's laboratory.

But to the technician plugging away to produce modern sinews of war, "Electronics" has become a noun that connotes miracles of achievement in aerial navigation, in communications, in accurate control that makes the weapons of battle more accurate and deadly. Electronic devices are making more than a substantial contribution to the business of winning the war.

When peace comes, for once, contributions to scientific warfare will not be filed away in military archives to await another orgy of destruction. Practically every war electronic technique has its counterpart in commercial and industrial applications to play a role in the better world we are fighting for.



Mallory has had the good fortune to have pioneered much in the field of electronics. Mallory vibrators, condensers, multiple switches, rectifiers, volume controls and other

devices were standards for pre-war communications and electronic controls. All of these precision parts, along with numerous Mallory laboratory projects, have been diverted to war production. For the duration, Mallory facilities are devoted to the needs of the Services.

When the new world unfolds with postwar industry at work, these same electronic products will do no little to make real the tremendous advances you will see in the products which make life worth living. They will turn up in most unexpected places, accomplishing jobs that seem little short of miracles today. It would take an encyclopedia to list all the ways in which electronic devices can better products for living.

We are proud of the part that Mallory electronic products, resistance welding electrodes, electrical contacts and other creations of scientific skill are playing in the war effort. We are prouder still of their usefulness for the future.

P. R. MALLORY & CO., Inc., INDIANAPOLIS, INDIANA • Cable Address—PELMALLO

MALLORY

SERVES THE AERONAUTICAL, AUTOMOTIVE, ELECTRICAL, GEOPHYSICAL, RADIO AND INDUSTRIAL FIELDS WITH . . . RESISTANCE WELDING ELECTRODES, ELECTRICAL CONTACTS, NON-FERROUS ALLOYS, POWDER METALLURGY AND BI-METALS . . . SPECIALIZED PRECISION ELECTRONIC PRODUCTS . . . THE MALLOSIL® PROCESS.

* Reg. U. S. Pat. Off.

UNION SPECIAL BAG CLOSING MACHINES



Aid PACKING and SHIPPING

UNION Special Filled Bag Closing Machines aid measurably in expediting delivery of goods vital to the war effort.

1. They replace slow, laborious hand closing methods. Many plants have already converted; many more must.
2. They provide additional bag closing capacity to keep pace with increased demand in plants using bags.
3. They make feasible the use of bags in place of other containers made of critical or scarce materials.

There are Union Special Bag Closers to handle every size and type of bag—to meet every output requirement—to fit into every filling and packing setup. Ask about them for your job—detailed, practical recommendations will be provided by experienced engineers.

BAG CONSERVATION

BAGS are ideal containers to use over and over again. "Empties" take up very little shipping space. And—Union Special builds sewing machines specially to patch and repair bags for long service. Ask for details.

UNION SPECIAL MACHINE CO.

World's Largest Exclusive Builders of
Industrial Sewing Machines
408 N. Franklin St., Chicago, Ill.

chine. The swatch is weighed with minute precision before and after this series of operations. (Cotton material gets an additional drubbing in a battery of laundry machines.)

• **At 60 Below**—If for winter clothing, the wool cloth probably goes to the cold chamber, where fiber (perhaps weakened somewhere along the processing line) may break down at 60 below. In testing thermal value, a winter garment is wrapped about an oil-filled drum heated electrically to body temperature. The amount of current consumed to keep the drum at constant temperature in the ice box determines the garment's insulation value.

Work in the box has spelled the doom of the cumbersome Army great coat. The researchers have detailed proof that light wind-resistant jackets with thin woolen inner-linings, combined with lined trousers, gives better protection while allowing freedom of movement and saving quantities of wool.

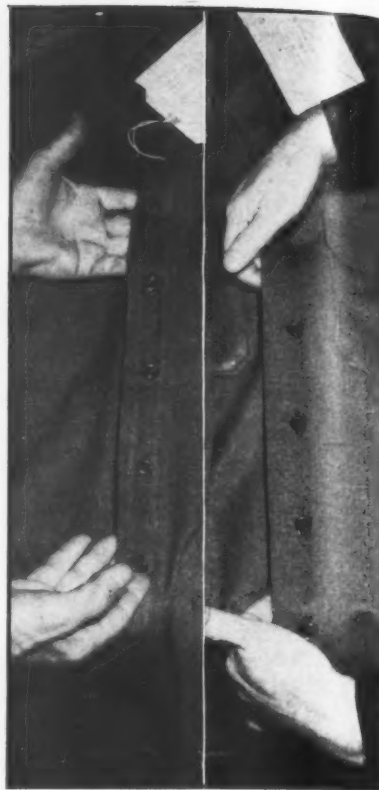
• **Beatings and Bonuses**—Raincoats and other water-resistant garments take a beating in a storm chamber, in which several dozen shower heads and a wind machine can duplicate nature's worst. Workers who model in the storms get a beating, too, but nice bonuses.

When it comes to acceptance or rejection of finished goods—whether cloth or garments—the work of the depot centers in a 1,082-ft. long inspection room. This room is the dream development of Colonel Vere Painter, now post executive officer, who guided its evolution while in charge of quality control.

• **Quiet as a Church**—Here 11,000,000 yd. of cloth a week roll past the eagle eyes of inspectors under strong blue lights. Other inspectors check finished clothing. Although the inspection staff numbers about 3,000, the big room is quiet as a church.



Good eye. Every yard of cloth accepted by the Army must undergo careful visual inspection. Imperfections are marked by tying a thread at the edge of the piece.



The Army simplifies a sport shirt. Elimination of the front panel (left) saves several manufacturing operations and cuts costs without sacrifice of the garment's usefulness.

The inspectors examine about 47,000 cases of garments a week. If a manufacturer's products show up well, only a few samples are pulled at random from the cases. In other instances, every single item is checked.

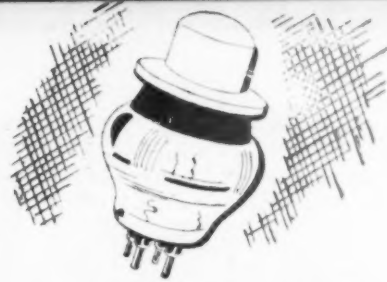
Rejects are shipped back to the manufacturer, who then disposes of the goods. If the depot does accept goods which are not made to standard but which can be remedied, an adjustment is made in the contracted price.

• **Outward Bound**—Cases that pass inspection are marked to show missing rejects, then roll on to the loose issue room, where the deficit is made up with duplicates. Then they go across a freight scale into trucks or boxcars. Garments destined for foreign shipment are taken from the boxes and compressed to one-third size in pressure baling machines—to save cargo space.

The depot has a legal department which lends a helping hand to plants having economic troubles (perhaps by showing how to get a needed loan), and which also cracks the whip over contract-evaders.

• **Help on Overtime**—One of the most recent significant developments at the depot is expansion of a comparatively new department to handle manufac-

**FROM AN IDEA
AND A RADIO TUBE CAME**



A tin-saving process

When the Jap took Malaya he hit us in a vulnerable spot. Three-fourths of our tin supply was cut off. But soldiers of the United Nations will still eat food kept wholesome in tin cans—and will use supplies protected by tin.

That protective coating of tin will be only thirty millionths of an inch thick, because American ingenuity has perfected a process which makes one pound of tin do the work of three.

Instead of dipping sections of strip steel into molten tin, steel engineers have developed a method of depositing tin by electrolysis. After electroplating, the ribbon of tinplate must be heated so the tin will "flow" and cover the plate perfectly. Since it is desirable to combine this operation with the electroplating process, steel engineers asked Westinghouse to help find a way to put the "flow" equipment in the electroplating line.

Induction heating was proposed. There would be no

physical contact between tinplate and heating coil. There would be no danger of arcing or burning, and strip could run through the "flow" zone continuously.

Test equipment was not immediately available, so Westinghouse engineers set up a model "flow" section—in a radio manufacturing plant! A clothes wringer pulled the strip through the heating unit. Electronic broadcasting tubes supplied high frequency current for the induction heating coil.

The results were so satisfactory that a major part of U. S. tinplate will be rolling from production lines using this tin-saving method—developed through the co-operation of Westinghouse and steel industry engineers. That is W. E. S. We'll be glad to put it to work for you. Just phone the nearest office. Westinghouse Electric & Mfg. Co., East Pittsburgh, Pa.

J-94532

Westinghouse

**WESTINGHOUSE
ENGINEERING
SERVICE**

A nationwide corps of engineers offers you electrical and production experience gained through years of working with your industry.

In addition to engineering help on specific industry problems involving electrical power, these men can give you assistance on these other vitally important activities:
Product development: engineering of

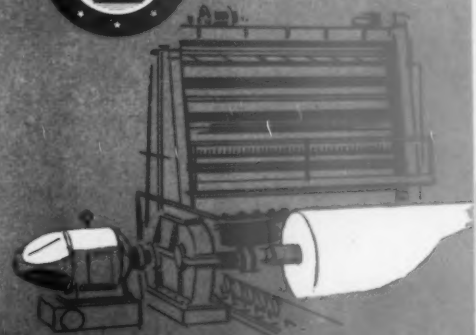
equipment to meet war requirements. *Maintenance:* help in making existing equipment serve better, last longer. *Rehabilitation:* redesigning and rebuilding obsolete equipment for useful service. *Material substitution:* adapting available replacements for critical materials.

W. E. S. is available to *all* industries. Put it to use today on your production problems.

W.E.S.

in the PAPER industry

A 210" kraft paper machine was designed for a maximum operating speed of 1250 ft. per min. Westinghouse engineers found that an increase in drive speed would increase production. Modifications in control and speed-regulating equipment boosted maximum operating speed to 1540 fpm ... an increase of 190 fpm over the maximum for which the drive was designed!



turers' overtime problems. This department is only concerned with overtime that results when a change in Army movements necessitates drastic reduction in the contract delivery period.

Suppose tropical uniforms are being manufactured for a division not scheduled to leave for foreign duty until a set date. Then the departure date is advanced by 30 days. The depot tells the manufacturers to run up overtime, or take on more help, and send in the estimates of increased cost over the original contract. These additional cost items, which vary widely from plant to plant, are carefully scrutinized by field men.

• **Inspection Branches**—While all procurement of Army clothing is handled by the Philadelphia depot, additional inspection units have been set up in Boston, Springfield, Mass., Pawtucket, R. I., New York, Charlotte, N. C., Atlanta, Dallas, St. Louis, and Chicago.

Col. Robert C. Brady, recently appointed commander of the Philadelphia depot, will have supervised the expenditure of a billion dollars by the year's end—all for woven clothing, for the depot has nothing to do with the buying of leather or accessories.

Decking a Wave

Here's how Marshall Field does it—and a streamlined job of long-distance merchandising. Store organizes own "A.E.F."

Enough time to equip 470 enlisted Waves at normal speed was simply not allowed by their crowded training schedule at Madison, Wis. So Marshall Field & Co., with the contract to fit the clothes (from seven makers of required items and several other makers of optional items), had to devise a high-pressure method.

• **A Special Crew**—Field's personnel department spent a month preparing for the job. Then it trained a special crew of 125 people from its Chicago store—complete with saleswomen, fitters, basters, rippers, stockboys and girls, guards, checkers, credit and charge service, transportation and shipping department, and legal advice on Wisconsin's permit and retailing laws.

Sunday of last week this expeditionary force took over a students' ballroom at the University of Wisconsin, by next morning transformed it into a well-equipped store with a complete stock of regulation Waves clothing where the gals could spend any or all of their \$200 uniform allowance.

• **Through Two Lines**—At 2 P. M. Monday, 58 Waves in two platoons marched into the improvised shop. The first platoon removed its civilian outer



If Marshall Field & Co. didn't make a dime out of its two-day stand in Madison, Wis., when it outfitted 500 Waves, complete with uniforms (below) and accessories (above), the resultant publicity was overwhelmingly favorable—and valuable. (Above) Waves shop for accessories. (Below) Uniform fitting.



garments at a check rack and proceeded along the uniform line. The second platoon moved through the line that handled miscellaneous merchandise.

First stop on the uniform line was the blouse table. Each girl wore away one blouse, carried several others. At the suit racks, a saleswoman gave her two jackets and suits of her size; the girl wore away one, carried the second. At the coat racks, she obtained two coats.

• **In the Fitting Section**—This brought her to the fitting section. Each fitter pinned and marked only blouses or jackets or suits or coats. If a second fitting would be needed, the girl received an appointment, and her garments were sent to an adjacent ripping and basting room for immediate attention. For final alterations, clothes went

to Chicago by truck and were scheduled for return, ready to wear by the end of the week.

Garments requiring no alterations were boxed, given to the Wave to carry away. After getting hosiery and hats, each girl stopped at the check rack and resumed civilian dress. Next she moved along the miscellaneous merchandise line. Meanwhile, the second platoon had started through the uniform line.

Equipping the first group of 58 took 90 minutes. All 470 received uniforms, were measured and fitted, by 4 P. M. Tuesday, in 16 working hours.

Arctic Raiment

Demand of QMC for new cold-weather clothing puts 15 West Coast manufacturers in line that has postwar prospects.

Among the byproducts of the war in the Pacific Northwest is the phenomenal growth of a cold-climate clothing industry. For the duration, production centers, of course, on items for the armed forces, but already there are signs that it will be important in post-war Seattle-Spokane-Portland economy.

• **QMC Sponsors Plan**—The establishment of a large quartermaster depot at Seattle has been largely responsible for the war growth of the new manufacturing group. This depot, set up last November, has become one of the largest military supply centers on the West Coast. From the outset, because of the closeness of the Pacific Northwest to Alaska and to other areas where United States troops might need cold-climate clothing, the depot has encouraged such production.

Procurement-planning officials last January made a detailed survey of all plants that might be capable of turning out required cold-climate items. A sample room was set up at the Seattle quartermaster depot, with working models of needed cold-climate items. From that point on, it was a case of adapting particular items to the various available plants and of getting the plants into production.

• **Contracts Total \$4,000,000**—Now approximately 15 firms in the Pacific Northwest are producing such cold-climate articles as parkas, gloves, comforters, and sleeping bags. Contracts total about \$4,000,000 with more business on the way. Some work has been spread to subcontractors who can do large-scale sewing.

Incidentally, the 15 firms plan to continue the same type of manufacturing after the war has ended. They believe that Alaska will be developed to a greater degree commercially than at any time in its history and that the same



★ Woodworth employs a nearly equal number of men and women. By Mid-Winter, personnel records will show 80% women and 20% men.

TO N. A. WOODWORTH MEN AND WOMEN FOR "Outstanding War Work"

Men and women of N. A. Woodworth Company have received the only military decoration given to civilians, the Army-Navy "E" Award. * * * This signal honor has been accepted with sober consideration of the greater responsibilities it demands. Having publicly acknowledged our production accomplishments, the Army and Navy expect us to maintain and even surpass past efforts as America's Armed Forces step-up the military pace against Axis aggression.

* * * Mighty bombers, deadly fighter planes are impotent if integral engine parts fail to stand the stress of combat flying. In manufacturing over 100 highly precisioned engine parts, Woodworth employes keenly feel their responsibility in this country's war effort. * * * Management and labor are pledged and anxious to meet any new production goals and mechanical requirements set forth by the Army and Navy to always be worthy of the "E" Award.

N. A. WOODWORTH COMPANY

AIRCRAFT ENGINE PARTS • PRECISION TAPS • HEAT TREATING, PLATING • PRECISION GAGES
FERNDALE, MICHIGAN

HELPING BURROUGHS USERS MEET TODAY'S PROBLEMS
WITH THEIR PRESENT EQUIPMENT

**"We can produce
these new reports as
a by-product on our
present machines"**



Burroughs has been able to show many concerns how to obtain these and other vital reports as a by-product:

Materials Used

Costs by Projects

**Labor Distribution
by Accounts**

**Taxes Collected
from Employees**

**War Bond Purchases
by Employees**

Today it is frequently necessary to meet new accounting requirements with present equipment—and, if possible, without increasing the time required.

In meeting such problems, Burroughs men can help you determine whether new records can be posted in combination with present records . . . whether figures and statistics for new reports can be obtained as a by-product of regular routines—or by utilizing your present equipment in some other manner.

To avail yourself of Burroughs' technical knowledge and experience, call the local Burroughs office. Or write—

**BURROUGHS ADDING MACHINE COMPANY
DETROIT, MICHIGAN**

Burroughs

★ FOR VICTORY—BUY UNITED STATES WAR BONDS AND STAMPS ★

items which have served the military in the cold climates can be adapted successfully to civilian use, with Pacific Northwest firms having an inside track on the business.

● **Sportsmen's Market**—They also are figuring that the Northwest's mountains really will come into their own as a winter playground after the war, thereby creating a large-scale demand among ski enthusiasts, skaters, etc., for items similar to those used by the armed forces during the war.

Tire Pickup

Here's how collection job will be handled, with Railway Express Agency as intermediary between citizen and OPA.

Railway Express Agency has undertaken the job of corralling the country's excess passenger car tires for delivery to Defense Supplies Corporation warehouses. Effective Oct. 15, the Office of Price Administration ordered citizens to turn over to it all such tires, meaning those in addition to the five per car necessary for minimum operation (BW—Oct. 17 '42, p8). It works this way:

● **Call or Write**—If you live in an urban area served by the Express Agency, you should call or write and tell it to pick up idle tires. The Oct. 15 order applies to casings, not inner tubes, but tubes are also acceptable. When the expressman arrives, he will give the usual company receipt and also a receipt from the Defense Supplies Corp.

The latter is a federal document carrying complete information on the item relinquished and the Express Agency man will show how to make it out. Requested data include make of tire or tube, size, and whether new, used, or unused retread. You are allowed to deliver the tire to a DSC warehouse but this gums up things for all concerned. Country people are requested to bring casings to the nearest express office.

● **Payment by DSC**—At the 160 DSC warehouses tires will be checked and their value determined. Here the Express Agency responsibility ends; it has nothing to do with getting checks back to former owners, and company officials are hoping that Uncle Sam won't hold up payment, since that might cause ill will against the express service. The company's concern is justified. A U.S. appraiser at Pittsburgh reports that his first 3,000 tires are in a hopeless jumble, that many months will pass before owners can be paid.

OPA thinks it would be mighty nice and patriotic if tire owners would donate their excess. However, this is only a suggestion. The owner indicates on the DSC form whether he is giving or sell-

★ *NEW for magnesium dust!*

(Class II, Group E hazards)

★ *NEW for coal and coke dust, carbon black!*

(Class II, Group F hazards)

★ *NEW larger sizes for petroleum vapors!*

(Class I, Group D hazards)



NOW . . . the Family of G-E Motors

listed by Underwriters' Laboratories for hazardous places

Is Even More Complete

No single type of motor is "best" for all kinds of hazardous locations. That's why General Electric has pioneered with an entire family of specially protected motors, listed by Underwriters' Laboratories, for specific classes of service, such as *magnesium or aluminum dust* conditions. This family is industry's most complete line of explosion-proof and dust-tight motors.

If you have a motor location where explosive vapors or combustible dusts may be present, you need a motor specifically listed for its particular hazard group, as established by the National Electrical Code. General Electric can help you choose the *right* motor, and can recommend control devices in keeping with the conditions:

For this or *any* motor need that can help speed war production, just call your General Electric motor representative, or write General Electric, Schenectady, N. Y:

NAME YOUR HAZARD

there's a specially protected G-E motor to help you meet it

ACETONE

ALCOHOL

ALUMINUM DUST

COAL DUST

GRAIN DUST

GASOLINE

METHYL AND ETHYL
ALCOHOLS

MAGNESIUM DUST

TOLUOL

LACQUER SOLVENTS

PETROLEUM VAPORS

BUILDER OF *TRI CLAD* MOTORS

GENERAL  ELECTRIC

ing the tire. Payment will be made in cash, government bonds, or war stamps according to preference, also indicated on the form. Used tire price is governed by ceilings, will run somewhere between \$1.50 and \$11.15 each. There is talk of an upward revision in used-tire prices to meet complaints by dealers that present ceilings don't allow any profit for recapping.

• U. S. Pays for Pickups—Railway Express Agency, while officiating at the painful partings, makes clear to each owner that the pickup costs him nothing. It is paid by the government. The company will be satisfied if it breaks even on the business, since the time cost involved in the expressman's explanation of the form and in answering foolish questions is sure to run into heavy expense. Charge to the government for picking up a 25 lb. tire anywhere in New York City is 25¢.

So far the number of tires delivered has been insignificant. But a deluge is expected just before the Nov. 22 deadline when holders have had time to appreciate the hazards of holdouts. This is the date for national gasoline ration cards. When the motorist appears for his precious tickets, the ration book will be refused unless the applicant certifies that he has no more than five tires per car.

• Numbers Will Be Taken—Tire numbers will be taken so that checks can be made against possible monkey business. False applications for rationing are punishable by fines up to \$10,000 and jail terms to 10 years.

By this order the government hopes to add 2,000,000 to 5,000,000 tires to the national stockpile.

While inner tubes and truck tires aren't involved in this dragnet, Uncle Sam would like to buy any such that are offered.



Just a receipt—not a check—for one of the first tires picked up in New York City by Railway Express Agency. Remittances follow appraisals by OPA and Defense Supplies Corp.

Self-Metered

Patrons of various utilities take own readings, subject to periodic checkups. Companies thus save tires and gasoline.

Rural electrification, with its long distances between meters, has created new problems for the electric utilities since the tire-and-gasoline situation became acute. To conserve mileage, many companies now let consumers do their own meter reading.

• **On Post Cards**—The reports are mailed in on post cards with the companies checking every three months to see that customers haven't made mistakes and haven't fudged on the amount of current burned. First tried in rural areas, the post card system has worked so well that some utilities are extending it to urban and suburban territories.

Typical case is the East Tennessee Light & Power Co., with 10,000 country customers. The patrons have been called on to read their own meters subject to quarterly checks by the company's professional. If the cards aren't sent in, the company bills the consumer for one third of his actual consumption during the previous three months, thereafter making necessary adjustments on what the official quarterly reading shows. Savannah Electric & Power Co. asks rural customers to read their meters two months in every quarter.

• **In Other Regions**—Massachusetts has authorized gas and electric utilities to try meter readings every other month and to submit bimonthly bills. They are allowed to estimate the consumption of the intermediate month if they prefer. Ohio Edison Co., which has switched to bimonthly readings in a wide territory, expects this method to save it some \$8,000 annually.

During World War I, Detroit Edison Co. adopted bimonthly readings and billings, still retains it although patronage has almost quadrupled. Central Illinois Public Service Co. (Springfield) is trying bimonthly billing with 13,000 of its 180,000 customers. Commonwealth Edison Co. (Chicago and vicinity) has adopted bimonthly readings but continues to render monthly bills, estimating the intervening month.

In the Imperial Valley Irrigation District, California, 2,500 farmers are being taught to read the meters that measure the amount of water used and to mail their reports to headquarters.

• **Service Calls**—The conservation drive has in some cases been extended to include picayunish service calls. In the good old days, much rubber was wasted by accommodating utilities that sent out men to change fuses, open switches, etc., in customers' homes. Some companies now charge for such calls.

Georgia Power counted up 40,000 trips last year just to replace blown fuses. Hartford Electric Light Co. tells customers that its fleet of 100 cars has traveled a total of 1,000,000 miles on service calls and asks cooperation to eliminate unnecessary trips.

Tool Exchange

Blackhawk and Imperial Brass serve as clearing houses for scarce items on shelves of well-stocked distributors.

Bane of many a production department, and also of the sales department since imposition of price ceilings, is the large volume of high-priority orders for small quantities of this and that. Hurry-up orders for goods not in stock and unobtainable without a high priority harass distributors.

• **Country-wide Swap**—To solve both problems, two midwest manufacturers, who market their products through mill supply houses and related types of jobbers, recently have uncorked plans that permit exchanging and interchanging scarce items between the haves and have-nots among their distributors.

Neighboring distributors borrow and lend goods back and forth, but swapping on a country-wide scale is an innovation. It answers a pressing need of war contractors while permitting jobbers in nonwar areas to clear their shelves of scarce items with which they happen to be overstocked.

• **Eyed by Skeptics**—On paper the Shift and Shunt, or S.A.S., plan of Blackhawk Mfg. Co. (Milwaukee, hydraulic jacks and wrenches) and the Trading Post plan of Imperial Brass Mfg. Co. (Chicago, brass fittings and accessories) looked almost too good to work. Other manufacturers of hard goods were openly skeptical.

But Blackhawk and Imperial knew that many of their dealers had unbalanced inventories, long on some items and woefully short on others. Unbalanced inventories have had the effect of pushing downward the total inventories of some houses by as much as 3 or 4% a month. Such rapid liquidation of stocks would shut many a dealer's door if unchecked, would weaken the entire structure of industrial distribution. If the manufacturers could help their customers keep going in the famine years, the effort would return in the form of maintaining a stronger organization of distribution outlets.

• **Central Swap Bureau**—Both manufacturers saw that they would have to spark-plug any campaign that would start merchandise moving from slow stocks to where it was urgently needed. Also, only they could serve as the central bureau for swaps.

Their solutions of the problem differ in detail. Imperial publishes a monthly



A PIPE-CUTTER DOES IT

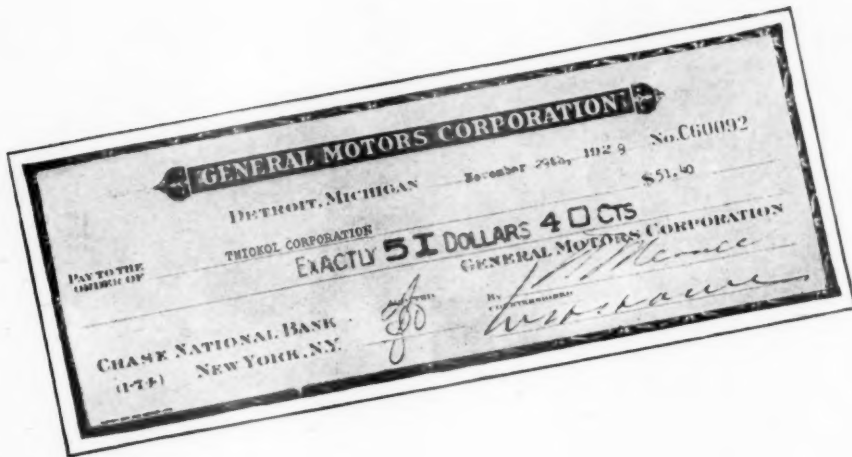
The head of the bed becomes the foot and vice versa, and the government



gets the metal that's left over. That, in brief, is the clinical result of a salvage operation prescribed by Morris Block, Pueblo (Colo.) hotel owner, for



the modernization of old-fashioned "brass" beds. Beds in Block's hotel yielded almost two tons of scrap (right) for the local salvage committee.



First Sale of a Thiokol Product

Synthetic Rubber Development is Thirteen Years Old

ON November 29, 1929, the then young Thiokol Corporation received payment from General Motors for the first shipment of Thiokol* synthetic rubber. That transaction was the first of the great synthetic rubber industry that is to fast free America from dependency on imported rubber.

Today Thiokol* synthetic rubber in self-sealing bullet-proof tanks, protective

coatings, hose and many other products is helping us win the War. Tires with treads of Thiokol* keeping war workers' automobiles rolling are the most recent achievement of our thirteen years of synthetic rubber development.

In current production (or in planning future products that will utilize synthetic rubber) be sure to discuss with Thiokol engineers the striking possibilities of

Thiokol*—America's first synthetic rubber. A letter or call will bring a quick response. Thiokol Corp., Trenton, N. J.

"AMERICA'S FIRST"

Thiokol
 SYNTHETIC RUBBER

*Thiokol Corporation trade mark reg. U.S.



More than brute strength

THE 'Load Lifter' is a tough, rugged hoist built for the kind of service war production demands. Its endurance comes as much from good engineering design as inherent quality of materials and workmanship.

Among the special features are four which contribute most to the long working life of the 'Load Lifter'.

1. "One-point" lubrication.
2. Hyatt Roller Bearings and Ball Bearing Motor.
3. Safety upper stop; lower blocks; sure brakes.
4. Two-gear reduction drive; sealed against oil leaks; steel interchangeable suspension.

'Load Lifter' electric hoists are built with lifting capacities of 500 lbs. to 40,000 lbs. in all combinations required for industrial lifting necessities. They are adaptable to almost every working condition within their capacities. Send for Bulletin 350.



'LOAD LIFTER' *Hoists*

MANNING, MAXWELL & MOORE, INC.
MUSKEGON, MICHIGAN

Builders of 'Shaw-Box' Cranes, 'Budgit' and 'Load-Lifter' Hoists and other lifting specialties. Makers of Ashcroft Gauges, Hancock Valves, Consolidated Safety and Relief Valves and 'American' industrial instruments.

bulletin, *The Trading Post*, of wants and offers coded by numbers. Names of "advertisers" are furnished upon inquiry, and the deal is then made directly between the two interested parties, with *Imperial* discreetly bowed out of the transaction. Check ups indicate that between 50% and 70% of all merchandise listed in one issue was moved within three weeks.

• **Prompt Action**—*Blackhawk* dealers list "Want to Sell" and "Want to Buy" on forms of different colors, send two copies of each to the company. Sell sheets are filed by stock numbers. Buy sheets are checked against this file promptly on receipt. If the wanted item is listed, the prospective buyer gets a wire telling him who has it. No material is sent to *Blackhawk* for reshipment or sale.

Both *Blackhawk* and *Imperial* say the results have exceeded their hopes, reckon their swaps in terms of hundreds of thousands of dollars.

• **Value Outweighs Cost**—Importance of a deal may be out of all relation to the cash measure of the transaction—as when lack of one brass fitting in an Ohio plant was holding up completion of a machine tool worth \$5,000. Finding this part on a Phoenix dealer's shelf and getting it shipped to the point of use was worth infinitely more to the war effort and to the machine manufacturer than was indicated by the price paid for the fitting.

Typical example of successful exchanges: Iowa Machinery & Supply Co., Des Moines distributor using both plans, quickly sold a stock of *Imperial* brass fittings originally stocked for a customer who now has no need for them in making his war product. The same house obtained prompt delivery from dealers throughout the country of 30 *Blackhawk* jacks urgently required by an aircraft parts plant.

• **Aid to Tanks, Planes**—Again, a tank arsenal designed and made a special fixture requiring *Blackhawk* jacks of a discontinued type. Through the S.A.S. plan, an Albany distributor unearthed the necessary units from dealers spread across the United States.

Likewise, a California aircraft plant could not ship a sizable number of combat ships because an important wrench was lacking from each tool kit. The wrench was a popular size in heavy demand, but 86 supply houses came through with prompt deliveries in response to an S.A.S. appeal from a Los Angeles house.

• **An Idea Grows**—*Imperial* and *Blackhawk* already see their plans being used by others to promote exchange of merchandise far beyond the original intention. An automotive distributor has formulated an exchange plan among his customers, is encouraging service stations and garages to swap parts, accessories, and supplies as required. And



...*"better let us do the fixin' Mr. Potts!"*

To a young man about to marry, the classic advice from *Punch* was the one word: *"DON'T!"*

We urge that same advice on all handy men around the house—or the office—whose trusty screwdrivers itch to open up a typewriter. Remember first that the modern typewriter, standard or portable, is a precision mechanism, beautifully adjusted. Remember second that if your well-meant efforts *do* wreck a typewriter today, you can't replace it for love or money! And third—our skilful specialists can repair your machines cheaper, better, faster.

Why take chances? Let *our* branch or dealer fix it, Mr. Potts—or Mr. Office Manager or Mrs. Citizen.

War production entrusted to us is precision work calling for craftsmanship of the highest order . . . skill won through many years of making America's finest office and portable typewriters.



**SEND YOUR
TYPEWRITERS
TO WAR**

Uncle Sam needs 600,000 more standard typewriters, made since Jan. 1, 1935. Sell all the L C Smiths you can possibly spare—to any L C Smith branch office—and help the war effort!

Smith - Corona

OFFICE PORTABLE

Typewriter Service

L C SMITH & CORONA TYPEWRITERS INC SYRACUSE N Y



PT BOATS




for example . . .

Metal fasteners and special cold forgings for PT boats are made on equipment used regularly in the manufacture of Hassall nails, rivets and screws. Thousands of similar examples. Catalog free.

JOHN HASSALL, INC.
Established 1850
408 Oakland Street
Brooklyn, New York



Be 100%
with your



★

Buy **WAR BONDS**

SAVE STEPS IN
St. Louis

STOP AT **HOTEL
WENNOX**

DOWNTOWN ON YOUR DOORSTEP

ALL ROOMS NOISE PROOFED • RATES FROM \$3.00

NEW RECORD-KEEPING
EFFICIENCY . . .

MOORE'S Loose Leaf Binders and Sheets will keep your records safe, convenient and in less space—more economically. Sheets easily transferred.

FREE BOOK

Contains life-size book-keeping forms completely filled in, illustrating use—a MOORE form for every kind of record. Used by over 300,000 firms. Attach coupon to letterhead, mail, and 140 page book will be sent free.



140 Pages!

JOHN C. MOORE CORP., Est. 1839
6241 Stone St., Rochester, N. Y.

Name _____
Business _____
City _____ State _____

the Chicago Mill Supply Assn. has set up a central exchange bureau for its members. After a trial period, it probably will be extended to serve houses from Nebraska to Indiana. If it proves itself on this larger scale, the idea probably will be promoted nationally through regional setups.

EQUIPMENT EXCHANGE

After an informal tryout by utility company purchasing agents, a community-wide exchange for surplus equipment and materials has been set up by the Los Angeles Chamber of Commerce.

The exchange, which is helping many concerns find needed materials, is a simple record service. Its detail work is done by one stenographer, with supervision by a committee of purchasing agents.

The X Co. has motors, pipe, a compressor it does not need, and lists them with the exchange. The Y Co., seeking such equipment, asks the exchange, makes its deal with X Co. The exchange takes the items off its lists, has nothing to do with price, priorities, deliveries, does not handle or see the stuff.

Most industries had started trading surplus equipment between themselves before this central organization was formed. The new system makes surplus equipment available to everybody entitled to buy it—the utility companies' stuff for manufacturers, the manufacturers' surplus for utility and oil companies. Experience during the first month was that more and more stuff was listed and a wider "market".

found. Listing is open to anybody. Outstanding trade to date, the meeting of a war production deadline by a manufacturer who got, through the exchange, \$4,000 worth of raw materials and an option on \$5,000 worth additional.

Lakes to the Sea

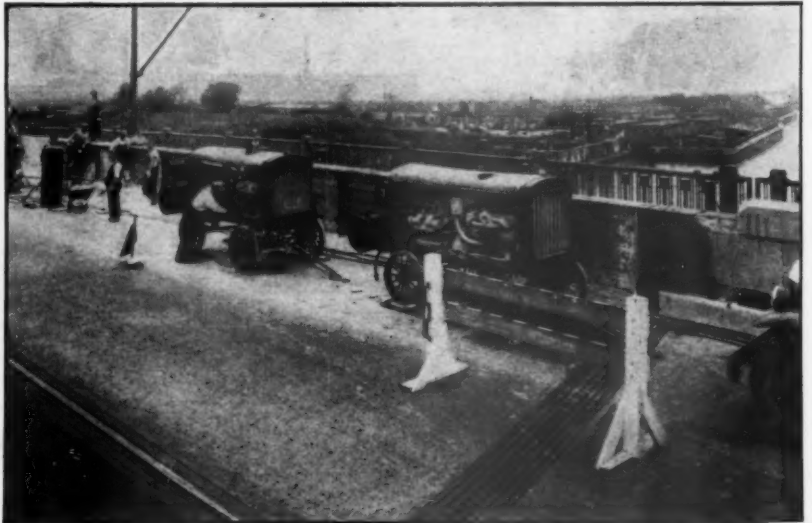
Navy unlocks bridges over Chicago Drainage Canal, providing outlet for merchant and naval craft from Great Lakes.

Builders of Chicago's Drainage Canal, connecting Lake Michigan with a Mississippi tributary, recognized that their ditch might one day carry large vessels; hence they designed all but one of the bridges for opening. But because the only traffic then in sight was small craft, they omitted the expensive machinery for activating the movable spans.

● **Salt Water Link**—Until now, fixed bridges have sufficed. But the war is requiring Great Lakes shipyards to turn out merchantmen and naval craft, sending them to salt water by the St. Lawrence or the Drainage Canal. The canal gets the nod in winter, when ice closes the Lakes to navigation.

Because of the bridges, it has been necessary to arrest construction of larger vessels short of completion, leaving off the tall deck structures to be added downstream. Still larger vessels could not be built at all because of the bridge bottlenecks.

● **Navy Clears the Decks**—Recently the



To reduce weight of Chicago's South Western Ave. bridge over the Drainage Canal, workmen are knocking concrete off the girders. Next step is to replace the concrete roadway with laminated wood and asphalt, the concrete sidewalks with wooden

walks. These weight savings will make possible changing the fixed bridge to movable, as part of a Navy program for building bigger ships on the Great Lakes and moving them to tidewater by way of the Drainage Canal and the Mississippi River.

PUSH BUTTON GIANTS

The ingenuity of American industry has combined the functions of numerous machine tools into coordinated giants. Push buttons control their complex mechanisms that deliver completely machined units as regularly as clockwork.

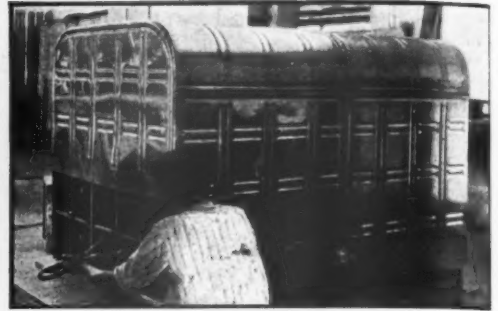
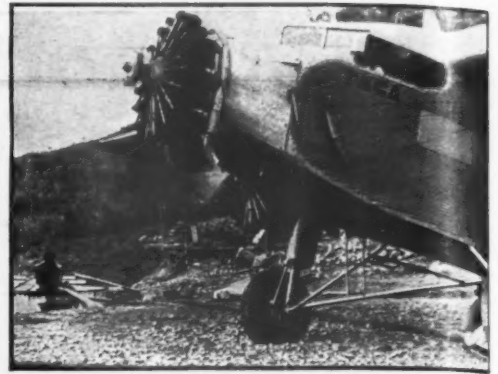
Such speed and precision call for quality lubricants. Texaco supplies them—through more than 2300 wholesale supply points in the U. S. And—to insure the utmost efficiency and economy in the use of its lubricants, Texaco's specialized engineering service is on the alert for all industry.



THE TEXAS COMPANY

—in all
48 States





SPEAKING OF CARGO PLANES

When a smart New Zealand barn-stormer discovered several years ago that he could make money hauling freight to isolated mines in Central America, he went into the air cargo business. By the time the war started, his line—called the Transportes Aereos

Centro Americanos (BW—Oct.12'40, p62)—had 52 planes operating out of 235 small airports. One of these planes, rigged up with a tank (lower right), can carry 600 gal. of fuel oil and unload it by gravity in 6 minutes (upper right). It has recently attracted the attention of Washington cargo plane enthusiasts, who see in this proved

commercial venture a model for big-scale wartime service. Central America is the home of a second independent air freight service—Acroviast—an airline operating in the Republic of Guatemala, claims the record for hauling more freight pounds for each mile of scheduled service than any other airline in the world.

Navy announced that, to facilitate passage of vessels built for the armed services, it has agreed to provide the machinery necessary for lifting or moving all of the bridges that span the canal in channels leading to the Mississippi. Some of the bridges are owned by the City of Chicago, some by the Chicago Sanitary District, and several by railroads.

Cost of the motors, machinery (practically all of it used equipment), and construction work is estimated at \$2,000,000. Title to the new facilities will remain in the U. S. Government, but the bridge owners will have options to purchase them within six months after the war emergency.

• **Save Critical Materials**—The Navy forecasts that the project not only will save far more than \$2,000,000 in the cost of ship construction, but also it will save critical materials that would be used for building new shipways on tidewater. Completion of the project is expected by Jan. 1, 1943—before the usual big freeze-up on the Lakes.

Toughest nut to crack is the city's South Western Ave. bridge, the only one of the lot that was built as a fixed structure.

Wage Tax Wins

Philadelphia's coffers get a \$4,000,000 windfall as U. S. Supreme Court refuses review of hard-fought test case.

Philadelphia hit the jackpot for about \$4,000,000 when the U. S. Supreme Court declined to review a battered test case involving the refusal of federal workers to pay their share of the city's 1½% wage tax (BW—Mar.29'41,p30).

• **Ante Up**—The high court's inaction means that the Quaker City's army of federal employees, now grown to 100,000, has no other course than to pay \$2,627,000, an accumulation of 1940 and 1941 taxes and penalties, within a short period. And a little more than half that amount in 1942 levies will be due by next Mar. 15.

Thus the city fathers emerge victors in a fight which began at the measure's birth in 1940. Instead of having to chop the levy (as seemed imminent last March when there was a withering barrage of public protest), they are now

sitting tight and pretty. Though troublesome, the tax has been perhaps the city's most reliable source of income, having returned \$18,567,845 for the first nine months of this year. By the fiscal year's end, the total should go over \$24,000,000—\$4,000,000 above the budget estimate.

• **Legal Beating**—This amount, not including the federal windfall, is due because few persons who work in Philadelphia, residents or not, are exempt. Test cases sponsored jointly by the American Federation of Labor and the Congress of Industrial Organizations unions were defeated in the lower courts, climbed the ladder of appeals to the state's highest—all without success. Until last week, the sole hope was that the federal employees' suit, already tagged with adverse rulings all along the line, might be considered by the Supreme Court.

The federal issue came to a head in March, 1941, when the War Department posted notices in the Quartermaster's Depot for personnel to disregard the tax. To test the issue, 22 Navy Yard workers made returns, stopped their checks, and marine engineer Norman C. Schaller became the legal guinea pig when the city sued.

WAR BUSINESS CHECKLIST

The Week's Orders

A digest of new federal rules and regulations affecting priorities and allocations, price control, and transportation.

Allocations

Manufacturers working under the Production Requirements Plan who have urgent need of material over and above the amounts authorized for fourth-quarter use may apply for additional quantities if they are producing essential war or civilian goods. Only small quantities of materials in addition to those already allotted are available for distribution.

Construction

Work to be stopped on all non-military construction not absolutely vital to the war effort and on a considerable amount of nonessential military construction as well, according to an announcement by WPB Chairman Donald Nelson. This will be accomplished by complete revocation of all priority assistance to such projects (page 19).

Steel

National Emergency steel specifications (BW=Aug.29'42,p50), designed to reduce the number of varieties of steel mill products to the minimum necessary to satisfy current needs, have been established by WPB. Schedules to be issued under the order will apply both to sizes and design of products and to composition specifications for alloy steels.

The first two such schedules were issued concurrently with the order. One establishes a list of permissible sizes for steel reinforcing bars and reinforcing spirals for concrete construction work. The other provides for establishment of standard sizes for railroad and electric railway wheels and tires. Several additional schedules are now in preparation. (L-211.)

Transportation

In anticipation of the coming squeeze in transportation facilities (BW-Oct. 24'42,p13), the War Production Board has set up a Division of Stockpiling and Transportation to take responsibility for priorities on all domestic and import transportation and storage facilities.

Chief objectives of the division will be:

(1) To insure that essential commod-

ities are imported for a reserve supply. (2) To determine relative transportation needs for the movement of commodities and materials essential to the war effort.

(3) To establish priorities schedules for the transportation of such commodities and materials.

(4) To establish priorities for the most effective use of available warehouse facilities, and to promote the safety of stocks of vital materials that are in storage.

The new division will act in an advisory capacity to the Office of Defense Transportation and other government departments and agencies on all questions relating to transportation and warehousing.

Trucks

Certain exemptions have been established under General Order ODT 21, under which commercial motor vehicles will be required to carry certificates of war necessity after Nov. 15 (page 20). Vehicles exempted include certain types of industrial, construction, maintenance, and farm equipment; motorcycles and motor scooters available for public rental; and trailers regularly drawn by passenger cars.

Farm Equipment

The farm equipment industry has been placed under the regulations of WPB's concentration program (page 16). Net effect is to transfer all output of farm machinery from large companies to small and intermediate producers. (L-170.)

Rail Requisitioning

Opportunity to protest proposed requisitioning of rails on nonessential railroads will, in the future, be granted to interested persons before the Office of Defense Transportation certifies the requisitioning action to WPB.

Authority of the Interstate Commerce Commission, which must determine whether or not "public convenience and necessity" will be affected, is normally a prerequisite to actual abandonment of any railroad line. Since this procedure proved too slow in view of urgent wartime needs, WPB has taken upon itself the function of requisitioning necessary rails without waiting for ICC to act and asks ODT to make quick surveys of lines where requisitioning is contemplated to determine whether or not the track in question is essential to a war economy.

Much dissatisfaction has been caused by the summary nature of this pro-

cedure, and it is for this reason that ODT has decided to allow opportunity for protest.

Food

Two contingencies not hitherto taken care of by the 60-day temporary freeze of food prices (BW-Oct.17'42,p16) have now been provided for by OPA. In case a seller did not deliver a commodity to a specific class of purchaser during the base period, he may determine his ceiling by taking the maximum price of the same commodity that he charged a different class of purchaser during that period and adjust it to reflect the customary differential between the two classes.

Price ceilings at wholesale have been established for flour and for pork products. Maximum flour price is the level prevailing between Sept. 28 and Oct. 2, 1942, while individual dollars-and-cents maximums have been set for all common cuts of pork (page 15).

High Wines

Distillers who sell high wines to the Defense Supplies Corp. are permitted to fix their price ceilings at cost of production plus profit of two cents per proof gallon. Permissible items under "cost of production" are costs of raw materials, labor, and plant conversion, overhead, and general and administrative expense not in excess of 14 cents per proof gallon. Producers must deduct return realized on sale of dried feed, fuel oil, other byproducts. (Order 108, Section 1499.3, GMPR.)

Fluorescent Lighting

No metal may be used in the manufacture of reflectors for fluorescent lighting fixtures after Oct. 31. Nonmetallic minerals, such as porcelain, may be used for this purpose without restriction.

It is expected that the changeover will cause a minimum of inconvenience, due to a program developed jointly by the Building Materials Branch of WPB and a group of representatives of the industry.

Kitchenware

Varieties of cast iron griddles, skillets, kettles, and other kitchenware used in households, restaurants, and Army kitchens have been cut from over 200 items to about 12. The order also reduces by as much as 75% the amount of iron that may be used in the permissible items. (L-30-C.)

Telephone and Telegraph

Manufacture of telephone sets will cease on Nov. 15. In the 15 days ending Oct. 31, production was permitted at



BIGGER WARTIME PROBLEMS AND MORE OF THEM

Each day of war brings tougher problems. An army of questions stands at Management's door clamoring for attention . . . Prices? Wages? Variable Costs? Fixed Costs? Taxes? Marginal Income? Break-even Point? Conversion Processes? Priorities? Critical Materials? . . . and PROFITS?

And at no time in the history of business has there been greater need for specialized experience in gathering and organizing the necessary facts and figures . . . and in focusing these data on the problems in hand to GET QUICK ACTION!

Few company organizations have within their own experience all the knowledge required for the process of conversion to new products. Yet, there is available to all business, a store of experience in management engineering which can be quickly applied to any urgent war production activity.

A discussion as to how Trundle Engineers serve their many clients in such capacities and how they might serve you, will involve no obligation.

Geo. V. Trundle Jr.

THE TRUNDLE ENGINEERING COMPANY Consulting Management Engineering

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NEW YORK • Graybar Building • 420 Lexington Avenue

4% of total factory sales value of sets manufactured in the calendar year 1941, and during the next 15 days a 2% rate will be allowed. Sets for the armed services and lend-lease are exempt. (P-204.)

Order P-132 replaces P-129, which expired Sept. 30, to give telegraph and cable companies blanket ratings for maintenance, repair, and operating supplies. Ratings of the old order (A-3 and A-1-j) are raised to A-1-a. Ratings of A-1-c, or better, are available for the construction of facilities for defense projects.

Other Priority Actions

WPB has frozen stocks of all types of new domestic vacuum cleaners in the hands of manufacturers, wholesalers, and retail dealers until Jan. 1, by Supplementary Order L-18-c which prohibits sales except to government agencies. . . . Machinery for control of distribution and use of pulpwood is established by M-251. Order is designed to reserve supplies, prohibit use in shortage areas. . . . To promote distribution and consumption of 1942's large supply of bulk sauerkraut, WPB in order M-245 has frozen stocks of canned sauerkraut in the hands of canners, wholesalers, jobbers, brokers, and chain-store warehouses. . . . An amendment M-36 allows use of manila cordage as life boat falls (ropes for raising and lowering lifeboats) on ocean, coastal, and Great Lakes' ships of 1,000 tons or over. . . . To reserve rattan suitable for use in boat fenders for that purpose, all other uses have been prohibited by M-248. . . . M-152 tightens controls over the use of arsenic (arsenious acid). Specific authorization is required for all use, and inventories must be reported to WPB. . . . To provide adequate supplies of steatite talc (a low-lime and low-iron powder) for military use in insulators, spark plugs, and fitters, M-239 prohibits use for cosmetics and rice polishing. . . . Under M-243 acetic anhydride is placed under complete allocation and use is prohibited except under WPB direction.

Other Price Actions

Eleven OPA orders (under Revised Price Schedule 64) establishing ceiling prices for 24 new domestic cooking and heating stoves became effective last week, bringing the total to 34. Orders apply to small producers (Class C), allowed to continue production under L-23-C, which prescribed major reductions in weight and elimination of strategic materials. . . . Sales and deliveries of ferns, leaves, foliage and boughs used by florists, previously subject to General Maximum Price Regulation, have been exempted from price control under Amendment 33 to Supplementary Regulation.

When the Army wants the lay of the land



... it climbs the sky and shoots the picture beyond the day's battle line (just as management-men search Business Week's news, for their own tomorrow's plan of action). Use BW for help in making *your* decisions; use BW to influence *their* decisions!



BUSINESS WEEK — *The News-base of Management's Decisions*

HOW TO convert plants and produce more and better war goods

HERE IS YOUR KEY to the problems of getting war production contracts, converting quickly and effectively to war production, and meeting wartime requirements for faster, better output. It brings you practical information in tips on threading the complexities of conversion and procurement, check lists of things to do and not to do, pointers on relationships with the government, and fundamentals, methods, and suggestions in profusion, for planning and controlling production, improving operations, and bringing your plant up to the efficiency required.



JUST PUBLISHED

HANDBOOK OF WAR PRODUCTION

By EDWIN ARTHUR BOYAN

Research Associate, Department of Business and Engineering Administration, Massachusetts Institute of Technology.

368 pages, 6 x 9, price only \$3.00

THIS handbook shows how to get best results in problems specifically associated with the war effort—arranging contracts, subcontracting, procuring materials and supplies, estimating, converting the plant, etc. It also covers planning and control, labor, inspection, salvage, industrial accounting, and other production factors ordinarily important to the manufacturing enterprise, giving the pointers and methods especially vital under wartime conditions and requirements.

Gives such practical helps as:

- over-all approach and technique to follow in the maze of contacts and relationships that must be developed in contract procurement
- pointers on determining nature of government requirements, how to handle bids, reasons for failure to get contracts, etc.
- major steps to be taken in conversion
- concise treatment of work simplification, including lists of 300 questions that indicate points for improving processes and operations
- duties of a priorities division; place in the organization; simple technique for follow-up of promises by supplier
- pointers on handling supervisory training, training on the job, and personnel policies
- how to determine what and how much inspection is necessary
- suggestions for cooperating with government inspectors
- how to set up and operate practical salvage systems
- example of careful and rapid bid development method, etc., etc.

Based on tested methods

Valuable information secured in direct contacts with numbers of successful war production plants is here organized and presented in a form to give you a quick view of the fundamental problems—the techniques of approaching them, getting information specific to your own plant and making use of it—and many practical methods for direct application.

ERWIN H. SCHELL says in the Foreword: "It is a working tool which the manufacturer may put to immediate use when undertaking production for the nation."

10 DAYS' FREE READING AND EXAMINATION. SEND THIS COUPON

McGraw-Hill Book Co., 330 W. 42nd St., N. Y. C.
Send me Boyan's Handbook of War Production for 10 days' examination on approval. In 10 days I will send \$3.00, plus few cents postage, or return book postpaid. (Postage paid on cash orders.)

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Company BW-10-31-42

THE WAR—AND BUSINESS ABROAD

Bombs Harry Axis

With raids from east and west virtually blanketing Italy and Germany, partners rush to move industries inland.

Winter and war were closing in this week on the Axis. News of the Russian front—from Murmansk to the Caucasus—if not all bad, was not good. In Egypt the British slashed out to the west in the long-awaited "winter" drive. Long-range Lancaster bombers hedge-hopped in daylight into Milan and Turin, left flaming beacons for night raiders sweeping in behind them.

New Significance of Raids

Although Britain's second front in the air could now be stacked alongside an African land front in measuring relief being afforded Soviet Russia, extension of raids to northern Italy was important for more than the damage that might be done to ports and factories supplying Rommel's Afrika Korps.

British raids from England and Egypt were interlocking. British raids on Norway in the north to Rostock and Stettin in eastern Germany fall just short of overlapping Soviet raids on Koenigsberg and Danzig. Russian bombings in Hungary, Rumania, and western Poland tie in with American raids from the Near East on Rumania's oil fields.

Industry Forced to Move

Although almost no part of Hitler's Europe is now safe from the depredations of British, American, and Russian bombers, Germany has in desperation uprooted many vital plants and relocated them in areas less subject to heavy bombing.

Leading the migration eastward have been the aircraft factories, dismantled and moved, or their output and personnel gradually shifted to branch plants. Messerschmitt, Heinkel, and Focke-Wulf have recently opened plants in the Tyrol of Ostland (Austria). A Junkers branch, Luftfahrt Gerate Werke at Krainburg in southern Carinthia (Ostland), has begun production of aircraft instruments. Another eastern branch, Aero-Engine Works Ostmark G. M. B. H. has issued calls for skilled personnel to expand output.

Mortenbau W. Kratzsch of Gossnitz, near the Czech border, until recently a builder of miniature motors for model aircraft, is producing small motors for gliders and sailplanes. Junkers has recently taken an interest in one of the



NEW PREMIER

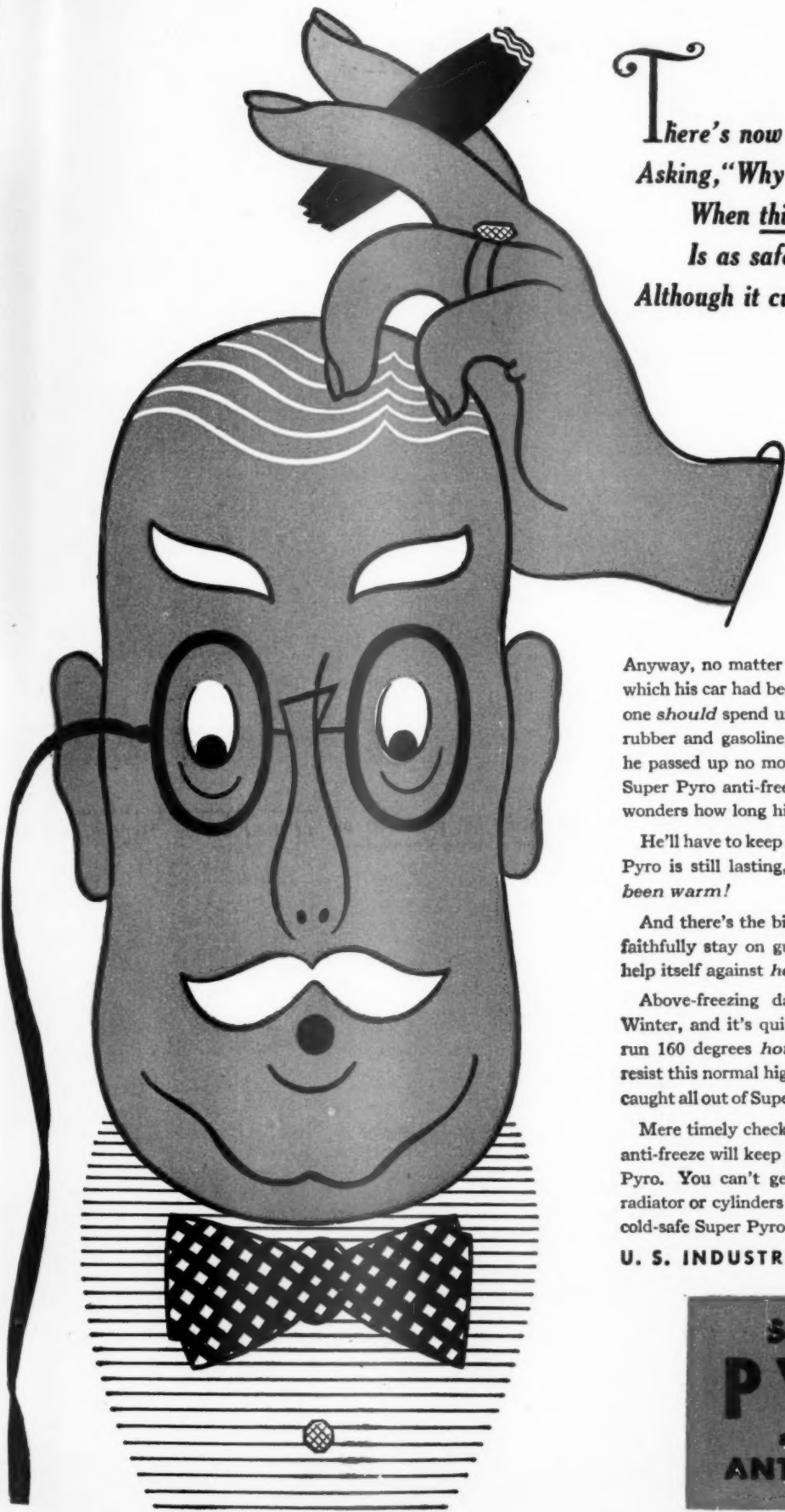
Gordon Conant, new Premier of Ontario selected by the retiring Premier Mitchell F. Hepburn, will continue in his capacity as Attorney General of the Province. Hepburn will retain his cabinet portfolio as provincial treasurer "for a short time" before retiring from public life.

largest German machine tool plants in the east, the Pittler Werkzeugmaschinenfabrik A. G. near Leipzig.

Less detailed reports indicate that German textile mills have been shifted east to Bialystok on the old Polish-Lithuania border; that Rhineland munitions plants have been moved to Silesia, Czechoslovakia, and Vienna; that the Warthegau of Poland is taking over much of the heavy production of the Ruhr. Last month the German construction industry formed a special committee to organize the allocation of key personnel and arrange for the movement of men, and equipment to the east. To facilitate construction of the East Wall in Poland, a western cement factory with an annual production of 60,000 tons was moved east and will have its capacity tripled.

In Poland, I. G. Farben has taken over the Boruta Chemical Industry Co. at Lodz; a new nitrate factory is being built at Chorzow in Polish Silesia.

In Sudetenland, I. G. Farben has established a subsidiary, Sudetenlandische Triebstoffwerke A. G., to manufacture



There's now a tycoon from Pre-War Asking, "Why did I ever spend more, When this anti-freeze Is as safe as you please, Although it cuts cost to the core."

Anyway, no matter what the style of anti-freeze to which his car had been accustomed, he knew that no one *should* spend unnecessarily now . . . nor use up rubber and gasoline, hunting all over. Whereupon he passed up no more places, but drove in and got Super Pyro anti-freeze, priced so modestly that he wonders how long his Super Pyro can last.

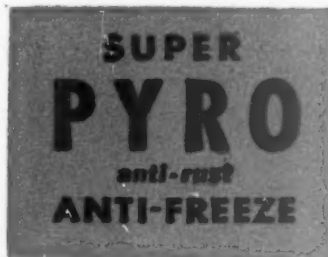
He'll have to keep on wondering, because his Super Pyro is still lasting, *though half the weather's been warm!*

And there's the big point. For no anti-freeze can faithfully stay on guard against *cold* unless it can help itself against *heat*.

Above-freezing days can come along in mid-Winter, and it's quite the thing for your engine to run 160 degrees *hot*. But Super Pyro is made to resist this normal high *heat*. You can't very well be caught all out of Super Pyro at the next onset of *cold*.

Mere timely check-ups that are prudent with any anti-freeze will keep you safe with economical Super Pyro. You can't get a new car; perhaps no new radiator or cylinders! . . . Get your highly heat-safe, cold-safe Super Pyro—now while you can.

U. S. INDUSTRIAL CHEMICALS, INC.



synthetic gasoline from brown coal. A new buna plant is under construction in Rumania; in Hungary a new oil refinery has been established; a plant near Sofia (Bulgaria) will process rose hips to provide sufficient vitamin C for 30,000,000 people annually; in Bulgaria, an I. G. Farben subsidiary, Deutsche Anilin Farben Weibel & Co., is constructing a carbon bisulphide plant; important Greek chemical firms are being expanded.

A new electric power plant built in Hungary by Vereinigten Gluhlampen und Elektrizitaets A. G. and the Hungarian Bauxite-Bergwerks A. G. will open next month. To expand Italy's aluminum production beyond her domestic needs, Germany has been shipping machinery for two new plants at Ferrara and Mantua.

Marks New Phase of War

In earlier stages of the United Nations' air war against the Reich, destruction of plants in the Ruhr may only have required a shifting of workers to labor-short embryo plants. Now, with interlocking raids by British and Russian bombers blanketing the whole of central Europe, air raid damages may prove irreparable in the time which remains before the United Nations force the Axis onto the defensive.

CANADA

Profit Pooling

Newsprint industry cuts pattern for concentration of Canada's civilian enterprise and split of profits.

OTTAWA—Canada's planned concentration of nonwar enterprise is in line with Washington's War Production Board activities (page 16). The machinery is in low gear now but is expected to attain full speed early in 1943.

• **Preview Available**—Canada's program is in the hands of the same do-or-die Scottish-Canadian who made the price ceiling stick—Donald Gordon, Bank of Canada's deputy governor. Gordon's planning has reached the point where he is able to give Canadian business a preview of what is ahead. The main features of the program parallel those already successfully applied in Great Britain's concentration of industry program:

(1) Manpower and materials for civilian enterprise will be reduced to the

minimum required for the maintenance of efficiency, health, and morale.

(2) Curtailment will be gradual, progressive, and equitably enforced.

(3) Business and industry will submit proposals for concentration worked out with Wartime Prices and Trade Board administrators.

(4) Early displacement of any industry is not proposed, but nonessential elements will be eliminated as quickly as possible.

(5) Concentration of production in nucleus plants will close inefficient operators.

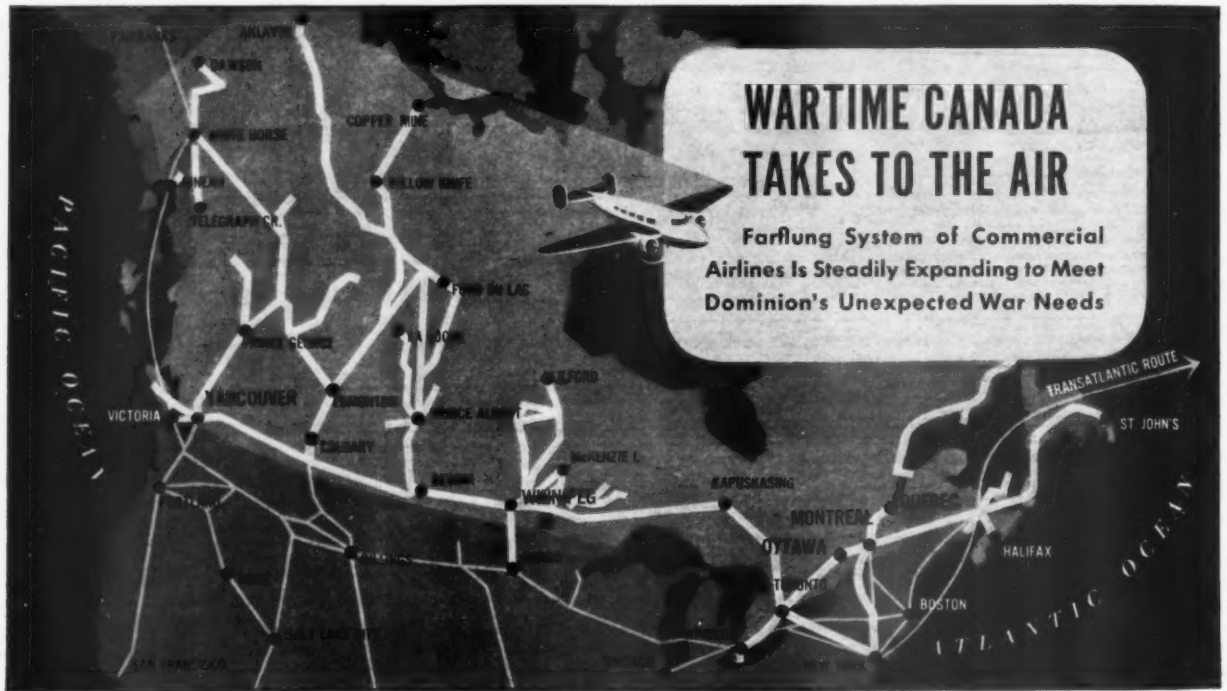
(6) Standardization and simplification of products will extend to nucleus plants.

(7) Production of goods for export will be maintained only to the limits of the Dominion's obligations to the United Nations and other friendly countries.

(8) Equitable distribution of short supplies will be assured by extended rationing.

(9) Closed plants will receive compensation through pooling of profits of nucleus firms.

• **Profit-pooling**—Canada's experiment in profit-pooling probably is the main point of interest to United States business. It already has been tried in the curtailment of the newsprint industry,



The increasing importance of air transport to all parts of the globe is symbolized by Canada's growing network of lines operated by Trans-Canada, Prairie Airways, Canadian Pacific, and Yukon Southern. Tying in with American routes at several border points and crossing to New York

from both Toronto and Montreal, Canadian lines are playing a most vital rôle in hemisphere war communications. The new Pan-American line to Alaska, via Juneau and Whitehorse, has become of special significance since the intensification of hostilities in the Aleutians, although the

highway between our Pacific Northwest and Alaska will be traveled by supply trucks before Christmas (BW—Oct.10'42,p14). How much strictly war business is being handled by Canada's airlines—and what kind of goods its freighters carry—is not revealed by statistics showing increased traffic.

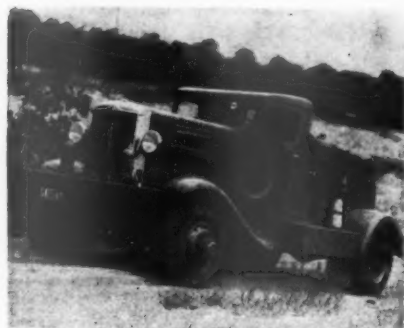


ON THE ROAD TO MANDALAY"?

THESE MARMON-HERRINGTON *All-Wheel-Drive* converted Fords, shown in the Australian Military Vehicle Parade in Melbourne, may be anywhere in the South Pacific, or Asia, now. But wherever they are, they are providing dependable transportation for United Nations troops.

On sandy beaches, churned by thousands of feet and wheels, they will plough through—where "ordinary" trucks would spin their wheels in impotent effort. Through jungle mud, across streams and up mountain grades that would stop conventional vehicles in their tracks, *traction on all wheels* insures fast and steady progress.

Hundreds of Marmon-Herrington



All-Wheel-Drives were shipped to Australia and New Zealand long before this war broke out in the Pacific. Hundreds more have followed since the Japs committed national Hara-Kiri by attacking the United States.

You, who are users of Marmon-Herrington vehicles in the oil fields, in road

construction and maintenance, in public utility services, etc., should be glad that *your purchases of these trucks built the organization and facilities that have made this contribution to America's war effort possible.*

In MacArthur's drive up through the islands to the mainland of Asia—which is *surely coming*—Marmon-Herrington *All-Wheel-Drives* will be in the vanguard—performing the same "impossible" feats they have done for years in the world's most difficult civilian jobs of transportation.

Invest the money you would pay for additional Marmon-Herringtons in United States War Bonds—and help *speed the Victory day!*

MARMON-HERRINGTON

INDIANAPOLIS, INDIANA

but variations may appear in the extension of concentration to other lines.

In newsprint, an administrator from Gordon's office worked out the pool plan in consultation with a committee from the industry. The bulk of the industry agreed to it, although it was not enthusiastically received by some units, especially those owned by U.S. consumers of newsprint who previously had stood out successfully against inclusion in the industry's self-imposed pro rata production plan and who regarded the pool as a nullification of their efforts to maintain independence.

• **Haves to Have-nots**—The average of production for the whole industry at the time the plan was adopted is the governing factor in the newsprint profit pool. Those producers remaining in business are to contribute from above-average profits to an industry pool, while those who have been displaced or contracted to below average will be compensated from the pool.

Brewers will feel the bite Nov. 1 when a ruling, restricting use of malt for any three-month period to the amount used in the corresponding period of the previous year, goes into effect. The order is designed to wipe out a 15-20% increase in beer consumption, due partly to sales pressure by the brewers. Salesmen engaged in this effort presumably will be released for other war work. Additional manpower may be shifted if a pending order restricting tavern and liquor store hours materializes.

• **Buses Curtailed**—The first service to be hit by the manpower campaign is passenger bus operation. Commencing Nov. 15, bus services will be localized except where rail facilities are inadequate. Bus travel will be limited to 50 miles, with special permits for longer runs only where the transit controller recognizes the need. Conservation of manpower, rubber, and gasoline are the announced objectives.

In line with concentration of civilian goods production, the Wartime Prices and Trade Board is working on an order which will bar new entries to the distribution field and may extend to contraction of existing outlets.

• **Timber Financed**—In an effort to take up the slack in Canadian lumber production—attributed in the industry largely to fixed prices, which are claimed to have wiped out profits on domestic business, and more immediately to labor shortages—Ottawa has arranged for the financing of this season's timber operations. The government has agreed to guarantee 15% of the loss of any advances made to operators, and with this guarantee, the financing is being done by chartered banks. The lumber production effort is in response to American demands for more Canadian lumber, but because of the labor shortage, the season's output is expected to be below last year's.

MARKETING

Mail Order Entry

Firestone launches catalog business in which its stores and dealers participate; designed to keep retail outlets alive.

Nation-wide rationing of gasoline will sharply reduce automobile travel throughout the country as it already has in the East. Less auto traffic means fewer visits to stores. Moving swiftly in the face of this situation, Firestone Tire & Rubber Co. has just begun a mail order business for its 675 factory-owned stores and 35,000 dealers by sending out the first of 5,500,000 48-page catalogs.

• **Retailers May Take Part**—Twice a year Firestone issues catalogs of "allied line" merchandise available in its stores and in the establishments of its dealers. The fall and winter catalog, now in the mails, carries mail order blanks for the first time. Each retail outlet for Firestone products may become a distributing point for this direct-mail trade.

The company regards the mail order move primarily as a wartime expedient, planned simply to help keep dealers in business. Profits accrue mainly to the retail outlets. The program plans do not go beyond the war.

• **Postwar Status Undecided**—Naturally, if the idea gives promise of continued postwar success, Firestone would pause at length before abandoning it. But, so far as factory thinking goes right now,

mail order business does not have the advantages that in normal times accrue to sales developed on the floor.

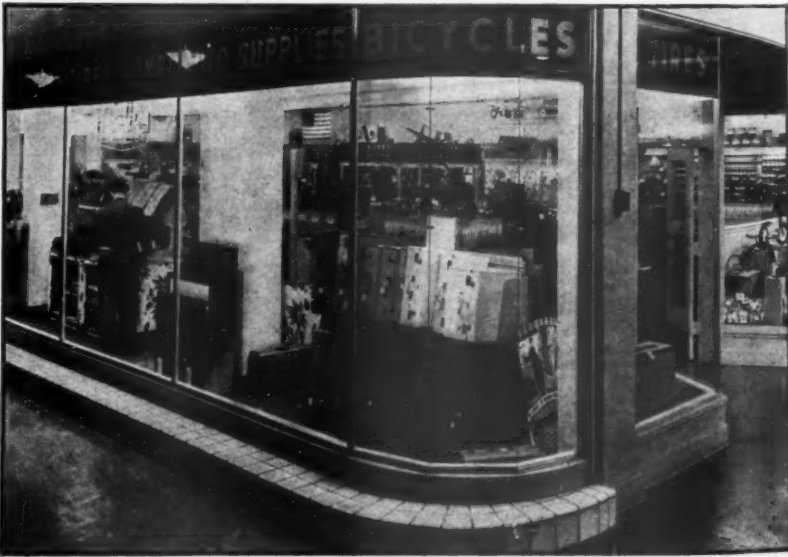
To embark in the mail order field, Firestone is drawing on a backlog of more than ten years of experience in direct selling of goods other than the tires, tubes, batteries, and gasoline that have become standard sales items for nearly all tire companies. And the history of this experience itself is worthwhile.

• **Branching out in Radio**—As the depression years quickened the retail search for goods with which to increase volume, Firestone stores and dealers began to stock car radios. Therein lay the true beginning of allied lines selling, for the presence of car radios led almost automatically to the sale of home radios. It was the first move out of the previously narrow channel of retail tire store selling.

Home radios led to electrical appliances—flatirons, for instance. Then, if a flatiron sale could be made to a housewife in the Firestone store, why not offer her an ironing board at the same time? The trend was in full bloom.

• **Gloves to Gas Ranges**—Today's catalog lists several thousand items in a hundred or more classifications, all the way from work gloves to gas ranges. Scores of suppliers sell to Firestone; the catalog listings include nationally advertised names and the company's own brands, Firestone and Modern Home.

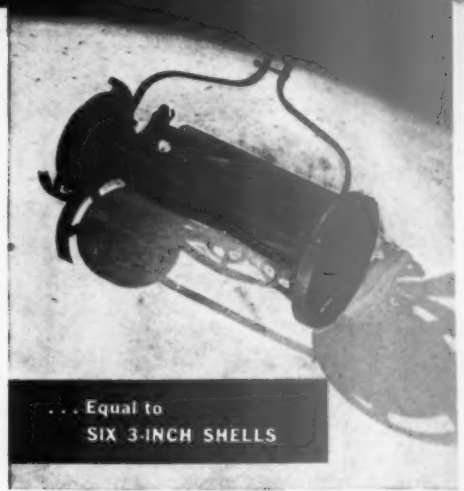
Supplier relationships stood Firestone in good stead when war came. Prewar supply sources were often loath to take



Until depression days, Firestone dealers were strictly tire-and-battery men; subsequent merchandising policies have called for the additional lines of auto supplies, toys, electrical appliances. Latest venture: mail orders.

What your junk will make

Useless scrap rusting away in your cellar has enough steel in it to make vital military equipment—as shown in the following pictures...



... Equal to
SIX 3-INCH SHELLS



Equal to
SEVENTEEN .30 Cal. RIFLES



... Equal to ONE
.30 Cal. MACHINE GUN



... Equal to ONE
.30 Cal. MACHINE GUN



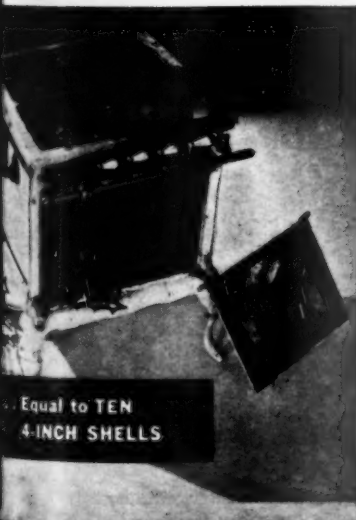
Equal to TWENTY 37-MM.
ANTI-AIRCRAFT SHELLS



... Equal to TWO
.30 Cal. RIFLES



... Equal to TWO
STEEL HELMETS



Equal to TEN
4-INCH SHELLS

How to turn in your scrap . . . Ransack your attic—your garage—your cellar. Gather all the old “junk” in one place. Then call up your Salvage Committee. Or a junk dealer—he’ll buy it. Or take it yourself to the nearest collection point. If you live on a farm, phone or write your County War Board or your County Agent. *But act now*—your country needs every pound of old scrap iron or steel you have! Remember—about one-half of the raw materials used for making new steel is scrap.



**UNITED
STATES
STEEL**

AMERICAN STEEL & WIRE COMPANY · CARNEGIE-ILLINOIS STEEL CORPORATION · COLUMBIA STEEL COMPANY · NATIONAL TUBE COMPANY
TENNESSEE COAL, IRON & RAILROAD COMPANY

Get in the Scrap-for Victory!

on new customers in the face of anticipated cuts in production, but they would continue to supply old outlets. So Firestone has been getting merchandise that newcomers have to go without.

• **The Sales Method**—The mechanics of the mail order setup are simple. To start with, factory stores and dealer outlets order as many catalogs as they need for their trading areas. These are mailed directly from factory to customer, imprinted with the name of the retailer. Customers mail their orders to the store whose catalog they have. Occasionally the store may fill the order then and there. More often, the order is relayed to the nearest of nine Firestone warehouses. The merchandise is shipped direct to the customer and charged to the retailer's account. Prices by mail are the same as in the store; postage is paid on all orders above \$2.

Selection of catalog goods is a big job. Items are tested in 50 of the 675 stores owned by the company. If they pass muster—and if they can still be obtained in quantity—they are added to the line.

• **Time-Tested Methods**—A retail division within the factory's Akron advertising department prepares the catalogs, produced in the time-tested and successful mail order pattern of presenting detailed facts about the goods, illustrating all items, rotogravure and color pages, solid and sometimes splashy layout.

This same department prepares monthly sales plans for the factory-owned stores and the independent dealerships. Along with the sales plans go suggested interior and window displays, and newspaper advertising layouts. The dealer can use what he desires from this monthly sales plan. The plan, plus the

mail ordering, plus a continually widening array of both hard and soft lines of merchandise comprise the formula, which Firestone hopes will keep its retail organization intact.

Photo Finish

Retailers face a gloomy future as manufacturers slash deliveries 50%, anticipating huge military orders.

Voluntary rationing of photographic film scrawls unmistakable handwriting on the wall for 150,000 retailers and for the 6,000 dealers whose exclusive or major trade is photo supplies. Even the most optimistic tradesman sees a gloomy picture developing from announcement by top suppliers, Eastman and Agfa Ansco, of a 50% cut in deliveries of sensitized products.

• **Stiff Blow**—While the slash is neither surprising nor greater than expected, many dealers feel it's a Sunday punch on a bruised chin. Hard blows had fallen last year when WPB halted production of civilian cameras, and the industry restricted photographic paper. Neither of these was a knockout since feeding the millions of existing cameras still was big business, and inventories were large.

That film restrictions are necessary none deny—what with military demands, war industry needs, and lend-lease commitments. Photo men realize that in no previous war has photography been so vital; and they know imports are out, because their best foreign products came from Germany, France, Switzerland, and Britain.

• **Military Need Rising**—The cut to dealers is the result of no new WPB order. It stems from the fact that high priority work already has taken over American photographic production virtually 100%, and that the military's anticipated 1943 requirements alone would require an impossible 107%.

Next year's Army-Navy needs come to 700,000,000 sq. ft. in practically all of the 180 types of film. That is 50,000,000 sq. ft. more than the present U. S. capacity. Obviously some revision of figures is needed because it takes roughly five years to build new film casting equipment.

• **Lights on Priority**—Even a big reduction in military needs, however, will leave dealers little to offer the 20,000,000 amateur camera fans who bought \$120,000,000 worth of equipment and supplies last year—placing second in purchasing power only to Hollywood. For even if film were plentiful, camera sales are limited to those now in stock, and such accessories as flash bulbs, floodlights, and enlarger bulbs are about

JOBS—EVEN FOR 1-A'S

With the Christmas rush just around the corner, department store employment headaches (BW—Oct. 3 '42, p. 68) have reached the point where a 1-A draft classification no longer brings job applicants an automatic turndown at personnel departments. Employers are not only giving the nod but actually hanging out the "help wanted" sign to men waiting for the draft board to crook its finger.

Last week Marshall Field & Co. advertised jobs with modest salary and no future in Chicago newspapers with copy reading: "Perhaps you have been classified 1-A, but do not know just when you will be called. It's pretty hard to get a job under those circumstances. With this problem in mind, Marshall Field & Co. has available a number of temporary jobs for which we will consider applicants who are classified 1-A, 1-B, or who for any other legitimate reason may have to give up a position on short notice."

State draft boards applaud the policy for "humane consideration" and recommend it to other retailers with spot jobs and other positions that can be handled efficiently by men waiting for active service. The draftee-in-waiting is a natural for Christmas selling.

to be frozen by WPB metals conservation order L-28-A and B, henceforth to be sold only on priorities. Principal bulb makers are Westinghouse, General Electric, and Wabash.

Heading the campaign to soften war's impact on dealers is the National Photographic Dealers Assn., an organization of some 1,400 tradesmen in North America, Hawaii, and Puerto Rico. But even N. P. D. A. Secretary Homer O. Bodine admits that film rationing may prove fatal to many members.

• **Joker in the Deck**—Rationing's joker is that dealers are being limited to one-half their purchases of this time last year—when inventories were heavy in anticipation of the original 10% federal excise tax on photo products. Since fall normally is a slack retail season, Bodine foresees no great hardships before February.

Many exclusive dealers already have felt the pinch of war economy. About 600 of them folded during the past year due to shortages and draft calls. Most of the failures were caused by the gloomy outlook, as substitute merchandising is practically out of the question in view of restrictions on so many durable goods. Those attempting to weather

<p>PRESSERS CAPSULES FROM 20 100% QUALITY 100% ADVANTAGE 110 1/2" x 15" x 10"</p>		<p>LANSBURGH'S DEPARTMENT STORE 100, 100 and 100, 100 Under the direction of Western Finance Stock Clubs High Grade Investment Office</p>	
<p>WOMEN CAPSULES FROM 20 100% QUALITY 100% ADVANTAGE 110 1/2" x 15" x 10"</p>		<p>MEN WANTED TOP PAY—PLENTY OF WORK NO EXPERIENCE NECESSARY TRAINING PAID FOR • STREET CAR • BUS • OPERATOR • TRUCK DRIVER • MOTOR VEHICLE • TRUCK DRIVER • MOTOR VEHICLE • TRUCK DRIVER • MOTOR VEHICLE</p>	
<p>SALESWOMEN Experience Not Necessary 110 1/2" x 15" x 10"</p>		<p>SODA DISPENSERS 110 1/2" x 15" x 10"</p>	
<p>SALESWOMEN Experience Not Necessary 110 1/2" x 15" x 10"</p>		<p>CAPITAL TRANSIT CO. 110 1/2" x 15" x 10"</p>	

HELP WANTED—DESPERATELY

Time: Present.
 Place: Washington, D. C.
 Experience: Not necessary; preference to women and draft-deferred males.



**"Liability Insurance?
I can't see it!"**

It doesn't take a magnifying glass to pick out the mishaps in this scene that may cause loss through liability suits. Beware of Overconfidence. Every property and every enterprise needs coverage against claims for injury or damage arising from accidents. Our agent or your own broker will tell which type of insurance best fits your needs.

BE SURE—INSURE!

AMERICAN SURETY COMPANY
NEW YORK CASUALTY COMPANY

Home Offices: New York

FIDELITY • SURETY • CASUALTY



Better Lighting could have saved this hand!

11,600 industrial workers are killed or injured every day! Many of these tragic accidents happen simply because workers cannot see clearly and sharply at all times. Read how MILLER lighting can help you save lives, protect skilled labor, and speed war production in your plant . . .

Last year industry lost 42 million man-days through injuries alone! Think of the staggering cost to the war effort.

Better lighting is one positive way to reduce industrial accident hazards. In one war plant, for example, accidents decreased 11% after a new lighting system was installed. In another the frequency of minor accidents dropped nearly 54% when illumination was increased 18 foot candles.

These figures are from WPB's useful handbook, "Plant Efficiency."

Pioneers in Good Lighting since 1844

MILLER 50 FOOT CANDLER or 100 FOOT CANDLER can put an adequate, clear-seeing level of fluorescent *day-light* over every working surface in your plant. Watch what that does for worker morale and your safety program!

Or it may be some other type of MILLER lighting . . . incandescent or mercury vapor, for instance . . . is more ideally suited to your individual needs. MILLER works with all light sources and is in an unbiased position to give you the one best lighting system for your plant and employees.

MILLER engineers are located in principal cities. Ask to have one call for a serious discussion of how better lighting can help you now.

BUY U. S. WAR BONDS

THE
MILLER COMPANY
MERIDEN • CONNECTICUT

the war are scratching for supplementary stocks or are enlarging camera repair and maintenance departments.

• **Hush on Portraiture**—Where the 30,000 commercial photographers fit into the ration picture depends on their type of work. Certainly the priority system will protect only those whose work is vital, but little is being said about the portrait industry's 20,000 members, who bought about \$50,000,000 worth of equipment during 1941. Their chemical and equipment needs are largely the same as those of newspapers and technical publications, which carry A-10 ratings on their purchase orders.

While film and equipment restrictions are the immediate concern of the \$125,000,000 retail photography business, chemical shortages probably would have been felt sooner or later. Although the current photo-chemical situation is good, difficulties are in sight because of increased silver prices and because explosives makers are getting the lion's share of benzol, base of film developers. The gelatin supply, however, is plentiful and is conceded to be better than our pre-war imports.

• **Lenses Mobilized**—Another quarter from which restrictions might have come is the lens industry, which has converted entirely to war work, producing binoculars, rangefinders, gunsights, periscopes, and other armament necessities. Although civilian lens needs must be ignored, the American military picture here is bright, since the German monopoly is broken and better lenses are being cast and ground in this country (BW—Apr. 19'41, p53).

Besides chemicals and photo supplies, Uncle Sam and his allies are buying large quantities of finished products. Chief current demands are for high-grade movie cameras and projectors, film of all types and sizes (35 mm. for soldier-sailor "V" mail—other sizes for training purposes and microfilming). These demands have depleted dealer stocks on many items and developed in used equipment a black market that is commanding fancy prices, which likely will come under OPA scrutiny.

• **Eastman Sales Up**—While shortages and rationing hit retailers hard, figures showing their effect on domestic manufacturer sales are not yet available. Selling about 80% of the American photographic supplies and equipment, Eastman Kodak Co. rolled up a volume of \$97,539,272 in the first half of 1942—a 33% increase over the comparable period of last year, when business was approximately normal.

Dealers foresee little threat of a hoarding trend arising from film rationing. They point out that age is the principal enemy of film, particularly now when producers no longer have time to season their stocks in warehouses before shipping them to the consumer.

PRODUCTION

Sponge Iron Trial

Initial operations of new Republic plant early next spring will lay many arguments about making this "melting stock."

A week has gone by since the War Production Board gave the green light to Republic Steel for the construction of a \$450,000 low-temperature reduction plant for the production of "sponge iron" as a substitute for scrap for its new battery of electric furnaces (BW—Oct. 24 '42, p. 8). Meanwhile the Bureau of Mines, which was reported as "still trying to figure out whether it won or lost" its epochal fight for a sponge iron plant, was maintaining a cautious silence preparatory to renewing demands on WPB for an O. K. for enough materials to build the kind of sponge iron plant it has been plugging these many months.

• **Differing Objectives**—What the Bureau of Mines has been and is still after is a plant for reducing low-content iron ores like those of Wyoming, Texas, and many other states. What Republic is after is the economical reduction of the high-content magnetite iron ores from its mine somewhere east of the Adirondacks. The Bureau of Mines presumably lost out for the time being, because it had not decided on any one process but would "make a thorough investigation of various processes . . . while the construction of the pilot plant is progressing."

Republic got the nod, principally, because it was ready to go ahead with the Brassert-Cape process. The steel company promised to be in production within less than six months after the release of necessary construction materials.

• **What Sponsor Thinks of It**—Just the bare fact that the Brassert-Cape process is the "baby" of Herman A. Brassert, veteran steel consultant, was enough to tip WPB scales in its favor. He and his organization, H. A. Brassert & Co., have had something to do with the engineering and installation of a great many of the blast furnaces and steel mills now in operation throughout the world. When he was willing to stake his reputation on his opinion that his proposed low-temperature reduction plant would cost "approximately one-half as much per ton capacity as a blast furnace plant" to build and that its cost of operation and maintenance would be "substantially less," WPB gave its signal for action.

Briefly, and stripped of all the tech-

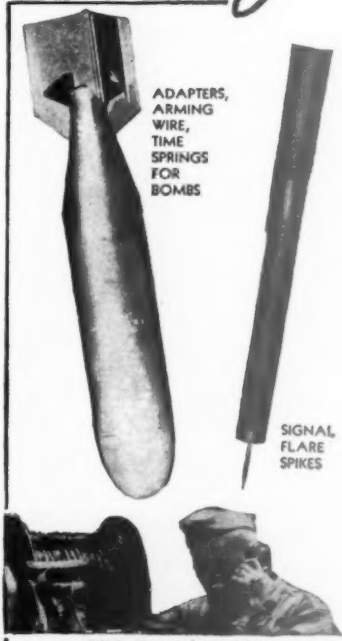
Paving the Way for the Paratrooper...



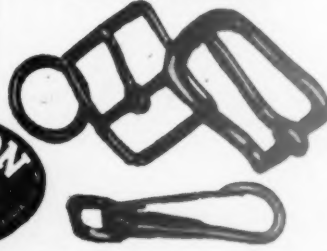
The bombs that "soften up" the Paratrooper's objective area contain vital wire parts. Minute-by-minute contact with supporting forces depends on miles of field, radio and telephone wiring. The very plane which carries him contains almost innumerable construction items made of wire.

Thus do many thousands of WIRE products play their essential "fighting" roles — in planes, guns, tanks, ammunition — and far behind combat zones, in ships and services of supply.

Victory comes first. To that, the entire production facilities of Keystone are devoted. These facilities are backed by 53 years of wire making experience . . . to help assure the right wire for each job — in war as in peace.



KEYSTONE
STEEL & WIRE CO.
PEORIA • ILLINOIS



nicalities possible, what Mr. Brassert proposes to build for Republic is a modified vertical, cylindrical Herreshoff furnace, a unit originally designed to reduce iron sulphide ores (pyrites) for their sulphur content in the production of sulphuric acid. Inside the 18-ft. shell of the furnace will be a series of Herreshoff circular hearths, one above the other. Iron ore, fed to the top hearth, will be kept in motion by steel rakes revolving about a central vertical shaft in the furnace, preventing it from sintering into a solid, easing it from one hearth down to the next.

● **Gas Enters at Bottom**—Meanwhile an updraft of hot coke oven gas (it could be reformed natural gas, blue water gas, or any form of prepared gas or by-product gas, but Republic has coke ovens handy to the new plant) will enter through tuyeres, or nozzles, at the bottom of the furnace to counterflow upward through the hearths and perform the duties of preheating, drying, roasting, or calcining, if necessary, and preliminary reduction.

Final reduction, i.e., the elimination of most of the oxygen in the iron ore (iron oxide) by its recombination with hydrogen and carbon monoxide in the gas, is accomplished on an ingenious slotted hearth in the bottom portion of the furnace. Built into the hearth are concentric, slotted rings. As another steel rake, connected to the furnace's central shaft, sweeps the partially reduced ore around them, the gas (fresh from the coke oven, hence high in hydrogen) comes upward through the slots to make the final reduction.

● **"Melting Stock" Results**—From the bottom hearth, the hot reduced ore drops automatically into a mechanical feeder connected with briquetting rolls, which turn out not soft sponge iron as it is usually thought of, but "melting stock" in the form of easily handled, high density briquettes. During the short cycle from reduced ore to briquettes, the iron is kept in a reducing atmosphere.

At no time in the entire reducing operation will the temperatures go above 1,300 F., and probably not above 1,100, or well below the temperature of reduction or absorption of other oxides (silicon, sulphur, phosphorus, etc.) usually found in iron ore and below the temperature at which reduced particles of iron become soft and sticky. Thus their fritting together and sticking to the walls of the apparatus, which is the bane of most sponge iron processes, will be avoided.

● **Avoiding High Temperatures**—Mr. Brassert points out that "to compete with the blast furnace, which in many respects is the most economical metallurgical unit used in the industry, the direct process must utilize the most economic reactions of the blast furnace process, which are those carried on at

low temperatures in its upper zones, but must avoid the high-temperature (3,200 F.) reduction and melting phase of the blast furnace process which occurs in the bosh and hearth."

If it should become desirable to melt the sponge iron to a liquid form before introduction into an open hearth or electric furnace, it can be done more economically in a foundry cupola than in a blast furnace with about 10% of the coke. In fact, such cupola melting makes possible the use of the Brassert-Cape process for low-content iron ores. Once they are reduced and melted, their impurities would float to the top of the heat where they could be readily skimmed off as slag.

● **Right Either Way**—With the new 100-ton-a-day reduction plant built and operating next spring, numerous questions that have muddled the sponge iron situation will be answered. If it is a flop, both the steel industry and the war metallurgy committee of the Na-

tional Academy of Sciences will be able to say, "We told you so." If it is a resounding success, the faces of the same groups can readily be saved, because they have been considering and evaluating soft, more or less fluffy iron that is the residue of ore after oxygen has been taken out in rotary kiln or other apparatus (from which the term sponge iron is derived). This plant will make iron briquettes very much like the ones compressed out of machine tool chips and turnings and fed to open hearth and electric furnaces for many years.

Iron Age was talking about orthodox sponge iron when it said, "Mr. Jekes estimates that his \$600,000 will build two plants, each giving 30 to 50 tons per day. Taking the average of 40, this means an investment of \$7,500 per ton of daily sponge iron capacity. You can build blast furnaces that will make real pig iron at a cost of \$4,200 per ton of daily capacity. And we know they will work."

MONTANA COMMANDO

Miners working at Anaconda Mining Co.'s properties in Montana are now having their collective morale uplifted in an easy-to-take way. Twice monthly Anaconda's three labor-management committees, through the picture pages of Copper Commando, get across to miners and smeltersmen the vital importance of copper to the prosecution of war. Robert Newcomb, employee publication specialist of New York City, heads a nine-man editorial board of six labor and three management representatives. Anaconda engaged Newcomb on recommendation of the War Department and WPB.

Gen. Somervell
Read and picture on page 7

Thought for Food
Read and picture on page 11

They Need Copper
Read and picture on page 17

SEPTEMBER 28, 1942

Meet the Unions

COPPER COMMANDO couldn't stand a chance of succeeding without the interest and the help of labor. From Great Falls, Mont. (Illustration, this issue), from the CIO and I. W. O. (above) all the groups have the honor of appearing. Among these groups are all kind members of Labor Union—management committees, of various kinds, of various



These are the heads of the labor unions, from left to right: John J. O'Connell, CIO; J. J. O'Connell, I. W. O.; J. J. O'Connell, CIO; J. J. O'Connell, I. W. O.; J. J. O'Connell, CIO; J. J. O'Connell, I. W. O.; J. J. O'Connell, CIO; J. J. O'Connell, I. W. O.; J. J. O'Connell, CIO; J. J. O'Connell, I. W. O.



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SEPTEMBER 28, 1942

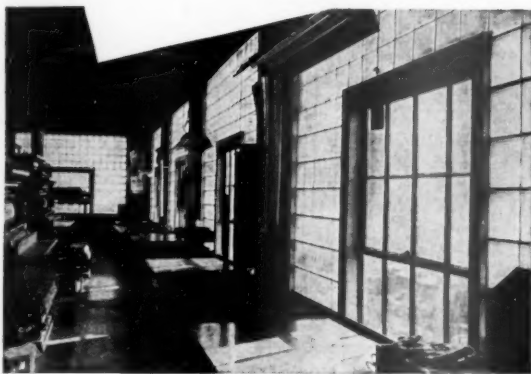


Here Comes the Ore!

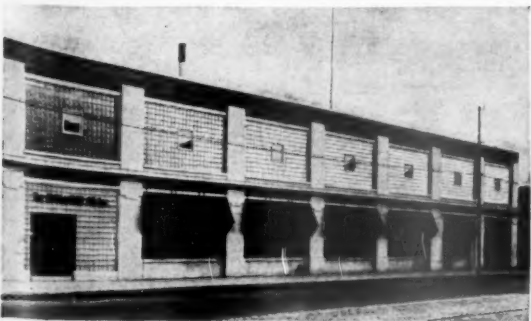
As thousands they don't about the ore but of the ore, the ore-often, even the ore and during the ore. Here are some pictures of the ore all throughout the country where the ore is being mined. It's hard to get a picture of the ore being mined.



SEPTEMBER 28, 1942



Replacing windows with INSULUX gives more efficient lighting and insulation . . . lower maintenance . . . heating economy . . . privacy . . . a more modern plant.



- ★ INSULUX GIVES BETTER LIGHT AND INSULATION
- ★ INSULUX PANELS USE LITTLE OR NO METAL

When plant efficiency demands replacement of faulty windows, the logical solution is INSULUX Glass Block.

Little or no metal is required. Precast concrete lintels save steel, and panels up to 50 sq. ft. need no wall ties. No painting is needed.

INSULUX *daylight* panels improve plant lighting. Prismatic block direct daylight deep into interiors. Yet INSULUX maintains full privacy.

The better insulation of INSULUX saves oil and coal; cuts heating costs. Ventilation can be provided by wood sash or louvres in the panels.

Installing INSULUX *daylight* panels mean a more efficient, easily maintained plant now and after the war. Glass block are fireproof—noncombustible.

INSULUX Glass Block are available for *immediate delivery at economical prewar prices.*

Owens-Illinois Glass Company, INSULUX Products Division, Toledo, O.

OWENS-ILLINOIS INSULUX GLASS BLOCK



WRITE FOR THIS NEW BOOK ON INSULUX

It shows in detail how to replace windows with INSULUX, using minimum metal. Installations in all shapes and sizes of openings are illustrated.

Looking for a replacement material?

How about
Patapar

The grease-resisting, boil-proof parchment

Patapar is a paper, yet wrought into its fibres are certain qualities that enable it to overcome the most difficult obstacles. It resists grease, fats, oils. It can be soaked in water for days and show no loss of strength. It can even be boiled without harm. It is a barrier to moisture vapor, dirt, dust and germs.

Today these qualities are appreciated more than ever. In the food industry and other fields where they are looking for packaging substitutes, Patapar has come up with the answer time and again—often resulting in a new economy.

It's filling needs like these:

WRAPPERS for butter, meats, fish, shortening, cheese, ice cream, vegetables.

PACKING DEHYDRATED AND FROZEN FOODS

MILK CAN GASKETS

MILK BOTTLE HOODS

DIALYZING MEMBRANE

SUBSTITUTE FOR OILED SILK

LAMINATED PATAPAR CONTAINERS (to take the place of tin cans).

BUSINESS EXECUTIVES:

If you think that Patapar might fill a need in your business, write us, describing in detail the application you have in mind. We'll give you our frank opinion as to whether Patapar could serve your purpose.

Paterson Parchment Paper Company

Bristol, Pennsylvania

West Coast Plant: 340 Bryant St., San Francisco

Branch Offices: New York, Chicago

Headquarters for Vegetable Parchment since 1885

NEW PRODUCTS

Weather Forecaster

If you have a new Kenyon Weather-caster, developed by Kenyon Instrument Co., Inc., Huntington Station, N. Y., and a barometer, you can make your local forecasts with reasonable accuracy. The device consists of four concentric, manually operated dials, bound in a 6½x9¼-in., plastic-covered booklet.

You set the "wind dial" to the direction and character of the wind, the "barometer dial" to the instrument's height in inches, the "barometer change dial" to whether it is falling, rising, or steady, the "present weather dial" to fair, rain, or overcast, as the case may be. Numerals appear automatically under an arrow above the dials. All you have to do then is refer to tables in the back of the booklet that translate the numerals into probable weather and wind conditions for the next 12 to 24 hours within a radius of 30 to 50 miles.

Hydraulic Test Bench

The Portable Hydraulic Test Bench, new product of Hydraulic Machinery Inc., 10421 Grand River, Detroit, is designed primarily for checking the hydraulic system of an airplane before it leaves the ground and without running the engines. It, however, will almost



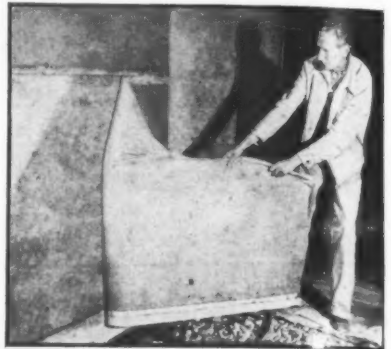
certainly find its way into factories for the checking of hydraulic systems on machine tools and other equipment and into garages that serve large numbers of hydraulically equipped vehicles.

In one compact, wheeled package is contained an air compressor for charging hydraulic accumulators and pumping hydraulic fluid in and out of a system, a variable displacement pump with a pressure range from 0 to 1,000 lb. per sq. in. for operating a hydraulic circuit at various speeds, a hardwood top to be used as a workbench, a mounted vise,

and a drawer for tools. Controls and connections, which are easily accessible from the outside of the unit, are labeled for quick identification.

Concrete Form Lining

Just before Pearl Harbor, United States Rubber Co., Rockefeller Center, New York, received government approval on a new absorptive liner for concrete forms which was cheap enough to throw away after doing its triple job



of strengthening concrete, improving its surface finish, and speeding its setting by removing water and air bubbles. Basically, the liner was a heavy cardboard with a rayon cloth facing applied to it with rubber cement.

Meanwhile, both rubber and rayon went on the critical list, and the company's laboratories went to work on replacement materials. Upshot is Hydron, a newer and even more efficient throw-away liner, which contains no restricted materials. The fabric now used for facing will strip from a finished concrete surface just as cleanly as the original rayon. The liner is already being used in such major construction jobs as the locks at Sault Ste. Marie and the new dams in the Tennessee and Sacramento (Calif.) Rivers.

Foam Extinguisher

Some of the toughest fire extinguishing jobs result from the flames of various alcohols, ketones, esters, ethers, and petroleum derivatives, but the official approval of both the Underwriters' and the Factory Mutual Laboratories indicates that Alcofoam, the newest foam extinguisher, will smother them effectively. It comes in powder form from American - LaFrance - Foamite Corp., Elmira, N. Y., ready to be poured into a "powder generator" attached to a line of fire hose. The foam produced by the automatic mixing of powder and water forms "an airtight, heat-resisting, tenacious blanket made up of millions of minute, tough, durable bubbles containing carbon dioxide gas."

LABOR

Utility Unions Join

Workers of electric and gas companies, 251,000 strong, form new independent and flirt with telephone men.

The movement to tie independent labor unions together into federations big and strong enough to make themselves felt in Washington received another boost last week end. Formally hatched at Chicago was the fledgling United Utilities Union of America, which first began to emerge from the egg at a preliminary session in Cincinnati three months earlier (BW—Aug. 1 '42, p. 54). Now U.U.U.A. takes a place as prominent as that of the Confederated Unions of America, which got away to its start earlier this month (BW—Oct. 1 '42, p. 86).

• **They Might Tangle**—U.U.U.A. gets under way not as a professed rival of C.U.A. but rather with proclaimed intentions of cooperating whole-heartedly to forward their mutual interests, particularly before federal agencies. There seems little likelihood of merging the two federations. The only probable bone of contention between them so far is the potent (150,000 members) National Federation of Telephone Workers.

The telephone group shows signs of shopping around before making up its mind. A month ago, C.U.A. leaders expected soon to welcome the telephone union to their outfit. Now U.U.U.A., after having a high official of the telephone union on hand through its organizing session, has carefully framed its qualifications for membership so that the telephone boys are eligible.

• **Natural Affinity**—Typical remark of utility delegates: "I've worked on the same pole with many a telephone man; I don't see why we can't work together in a labor organization."

Officers of the U.U.U.A. protest that they have no quarrel with the American Federation of Labor or the Congress of Industrial Organizations, but that the one-system public-utility bargaining organization seems better fitted to their needs than an independent utility union either split up into A.F.L. craft locals, ranging from boilermakers to teamsters, or else tied together into the cumbersome vertical organizations of the C.I.O.

• **Some Additional Reasons**—Scrupulously unexpressed, but nevertheless a strong motivation among the utility independents, is their deep-seated belief that the utility workers' intelligence



VIGILANCE TOO

Accidents are the enemies of production! Keep an eye on the hazards that cause them! Carelessness, new workers and the pressure of speed contribute most to the increasing accident toll of industry.

The vigilance of experienced safety engineers trained to recognize industrial accident hazards is vital to any plant in production for the war.

Employers Mutual has such a staff of engineers whose safety accomplishments have won the recognition of industry throughout the nation. These engineers are at the service of our policyholders.

Employers Mutual

LIABILITY INSURANCE COMPANY OF WISCONSIN

HOME OFFICE: WAUSAU, WISCONSIN

OFFICES IN THE PRINCIPAL CITIES OF THE UNITED STATES

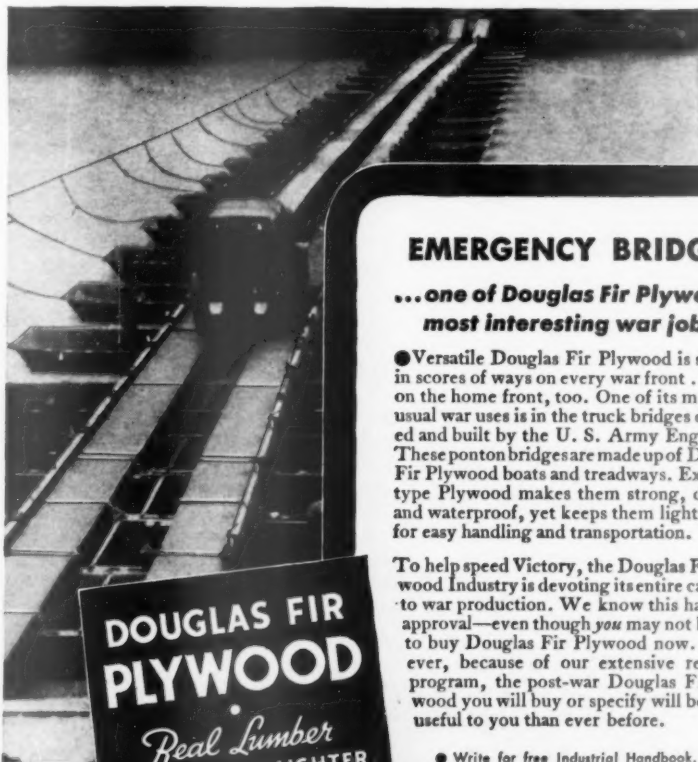


Photo by
U. S. Army,
Corps of
Engineers

EMERGENCY BRIDGES

...one of Douglas Fir Plywood's most interesting war jobs!

• Versatile Douglas Fir Plywood is serving in scores of ways on every war front . . . and on the home front, too. One of its most unusual war uses is in the truck bridges designed and built by the U. S. Army Engineers. These ponton bridges are made up of Douglas Fir Plywood boats and treadways. Exterior-type Plywood makes them strong, durable and waterproof, yet keeps them lightweight for easy handling and transportation.

To help speed Victory, the Douglas Fir Plywood Industry is devoting its entire capacity to war production. We know this has your approval—even though you may not be able to buy Douglas Fir Plywood now. However, because of our extensive research program, the post-war Douglas Fir Plywood you will buy or specify will be more useful to you than ever before.

• Write for free Industrial Handbook, prefabrication data or technical assistance. Douglas Fir Plywood Association, 1631 Tacoma Bldg., Tacoma, Washington.

DOUGLAS FIR
PLYWOOD

Real Lumber
MADE LARGER, LIGHTER
SPLIT-PROOF
STRONGER

Stronger
per pound
than steel!

and feeling of responsibility to the public interest average higher than among the rank and file with whom they might be lumped in the older federations. Also, their tacit dislike for some of the bigger organizations' policies is indicated by the newly adopted U.U.U.A. constitution. This prevents self-perpet-

uation of officers and provides easy means for a referendum of membership that can commit the body to anything except waiver of a national convention.

President of the U.U.U.A. is Joseph A. Fisher, Brotherhood of Consolidated Edison Employees. Secretary-treasurer is Herbert Sanford, United Brotherhood

of Edison Workers. Twelve geographically distributed vice presidents were elected.

• **Growth of Membership**—Even the organizers professed astonishment at the rush of assorted electric and gas independent unions to join their new outfit. Represented at Cincinnati in July were nine unions active in 12 utility systems, of which a couple are very small. Last Saturday, when it came time to decide who would be accepted, applications were received from more than 30 unions.

Actually admitted and signed up were 24 unions with dues-paying memberships totaling 251,000. Practically all of these units have been through representation contests with the A.F.L. or C.I.O., have been certified by the National Labor Relations Board or a state labor board, and have battled their employers to major decisions.

• **Some Ruled Too Young**—The committee turned down several applicant unions as too wet behind the ears or too chummy with their bosses. At the same time, sidelines doubters raised the point that some of the independents accepted have too recently been suspected of being company-fostered.

The actual membership of U.U.U.A. reads like a roster of many top-ranking operating companies of the power industry, with a slight admixture of smaller companies. Independent unions representing employees in the following companies are now members of the U.U.U.A.: Boston Edison, Central New York Power (Syracuse), Cincinnati Gas & Electric, Cleveland Illuminating, Commonwealth Edison (Chicago), Consolidated Edison (New York), Duquesne Light (Pittsburgh), East Ohio Gas (Cleveland), Florida Power & Light, Gulf State Utilities (Houston and Baton Rouge), Indiana General Service (Marion), Indiana-Michigan Electric (South Bend), Indianapolis Power & Light, Kansas City (Mo.) Power & Light, Long Island Lighting Co., Louisville Gas & Electric, Nebraska Power, Ohio Power, Queensborough Gas & Electric, Southern Indiana Gas & Electric, Twin Cities Gas & Electric (Providence), Union Electric (St. Louis), United Illuminating (Bridgeport), and Virginia Electric & Power.

LEAVE FOR SEAMEN

Tying in with a national recruiting drive for the merchant marine, Westinghouse Electric & Manufacturing Co. announced this week that all employees who join up through the U. S. Maritime Commission will have their jobs waiting for them on their return. The company policy provides that workers becoming merchant seamen will be granted the same leave of absence privileges given to those entering the armed forces.

First Rulings on Wage Freeze

The President's executive order providing for the stabilization of the national economy and the establishment of an Office of Economic Stabilization under James F. Byrnes takes on meaning only as rulings and interpretations clarify the pay freeze. First of these rulings came last week. Fundamental to all of them is the distinction in the executive order itself between wages and salaries. Wages are direct or indirect remuneration for work or personal services paid on an hourly, daily, or piece work basis. Salaries are defined as remuneration "regularly paid on a weekly, monthly, or annual basis."

• **Division of Responsibilities**—Consistent with this distinction, Byrnes has divided administrative responsibility for income control between the National War Labor Board and the Treasury Department. Jurisdiction over all wage payments is NWLB's province. It also has authority to deal with salaries up to \$5,000 a year where they are paid to employees "not employed in a bona fide executive, administrative, or professional capacity" or where such employees are represented by "a duly recognized or certified labor organization."

Control of salaries over \$5,000 a year and of salaries less than \$5,000 where they are paid to executive, administrative, or professional employees is vested in the Treasury where the Commissioner of Internal Revenue, Guy T. Helvering, is the authorized enforcement agent (Washington Bulletin, page 7).

• **Freezing Dates**—Over-all regulations covering salaries have been issued by Byrnes with the approval of the President. For salaries under NWLB's jurisdiction, they provide a freeze as of Oct. 27, 1942. Any relief from that freeze requires NWLB approval or must meet certain conditions (page 7). On wages, the first Byrnes regulations carry no precise directives beyond assigning full authority over them to NWLB. But NWLB had already announced that it was interpreting the Executive Order to mean that wages were fixed as of Oct. 3, 1942, save in situations covered by general orders or where the board directed specific changes.

NWLB had, by this week, issued six general orders and interpretations on wage stabilization. In substance they provide that:

(1) All NWLB-directed wage increases prior to Oct. 3 are effective.

(2) NWLB will continue to handle labor disputes over wages, and its authority to adjudicate such issues is not impaired.

(3) All wage increases put into effect on or before Oct. 3 are provisionally approved. NWLB may subsequently disapprove them when and if it finds they are inconsistent with the policies of the executive order. Arbitrators' or referees' awards providing for wage increases after Oct. 3, or contracts providing for increases after that date, are invalid and will not be allowed to take effect.

(4) Employers who employ fewer than eight individuals are exempt from the wage freeze provided that (a) they do not own or operate more than one plant or unit where the aggregate of employees exceeds eight; or (b) the wages, hours, or working conditions of their employees have not been established or negotiated on an industry, association, regional, or other similar basis.

(5) Employers may adjust wages of individual employees under the terms of an established wage agreement or established rate schedules without NWLB approval if the adjustments are the result of (a) individual merit increases within established rate ranges, (c) operation of an established plan of wage increases based upon length of service, (d) increased productivity under piecework or incentive plans, (e) operation of an apprentice or trainee system. Under certain circumstances, piece-rates may be revised. Increases made for any of these reasons must not result in higher costs necessitating an increase in price ceilings.

(6) Hiring new employees at a rate above that which was previously established is forbidden. If a wage rate for a job classification has not heretofore been established by the employer, the rate shall not exceed that which prevails for similar classifications within the area unless NWLB approves a higher rate.

People are funny!



..... speaking of big battles!

The world's greatest war goes on. One day recently, two girls in our office came back from lunch breathless with excitement. With their very own eyes, they had just seen a taximan bust a cop right in the nose. It was really super-terrific!

Sure, people are funny. You, too, so don't look superior. Little things in your life loom larger than cosmic events. People you know interest you more than millions you don't. Everybody's life is made of little things.

The Sunday comics can't match the news pages in significance, or useable information. But most people became acquainted with Sunday comics before they could read the news pages, or cared about information. The Sunday comics, through time and habit, became something familiar and personal. And they are entertainment and diversion.

So ever since adults admitted reading the Sunday comics, they have rated high as ways and means of reaching people and

registering with them. And the highest rating obviously goes to the best comics, in the best Sunday newspapers—which means the Metropolitan Group.

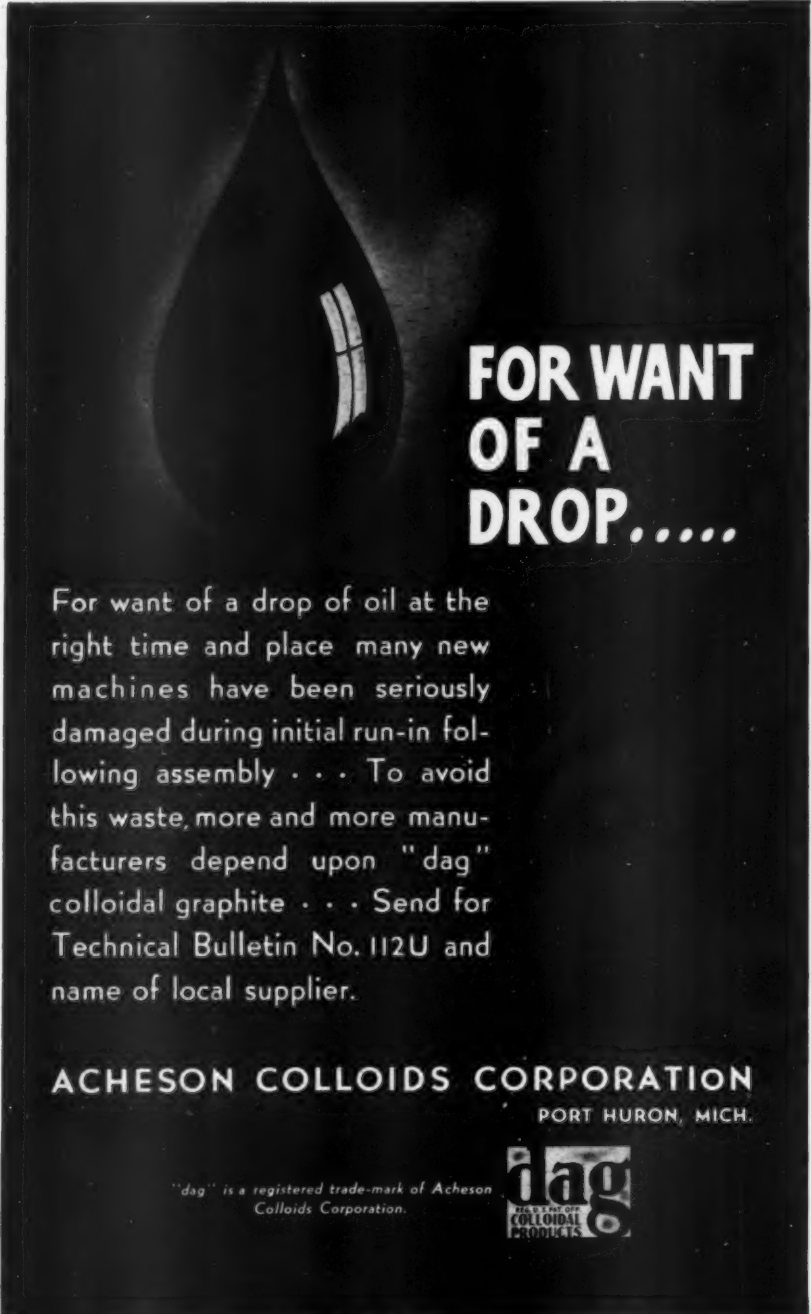
THESE twenty-four great newspapers in nineteen major cities total up 12,000,000 circulation—reach a majority of families in the urban markets that make the majority of national sales. No national medium touches the Group for intensive coverage, or placement of circulation where it counts.

And few other forms of media match the readership—81% among adult men, 79% among women—or the regular reading habit, on Sunday when people are at home, or the favorable mood-making qualities which get better acceptance for advertising.

The space unit is big. There are four colors to add color to your story. The cost is low... The time is now! Learn more about the Group. Ask any office soon!

Metropolitan Group

Baltimore Sun • Boston Globe • Boston Herald • Buffalo Courier-Express • Chicago Tribune • Cleveland Plain Dealer
 Des Moines Register • Detroit News • Detroit Free Press • Milwaukee Journal • Minneapolis Tribune & Star Journal • New York News
 New York Herald Tribune • Philadelphia Inquirer • Pittsburgh Press • Providence Journal • Rochester Democrat & Chronicle • St. Louis Globe-Democrat
 St. Louis Post-Dispatch • St. Paul Pioneer Press • Springfield Union & Republican • Syracuse Post-Standard • Washington Star • Washington Post
 220 East 42d St., New York • Tribune Tower, Chicago • New Center Bldg., Detroit • 155 Montgomery St., San Francisco



FOR WANT OF A DROP.....

For want of a drop of oil at the right time and place many new machines have been seriously damaged during initial run-in following assembly . . . To avoid this waste, more and more manufacturers depend upon "dag" colloidal graphite . . . Send for Technical Bulletin No. 112U and name of local supplier.

ACHESON COLLOIDS CORPORATION
PORT HURON, MICH.

"dag" is a registered trade-mark of Acheson Colloids Corporation.



I LIKE TO TRAVEL, TOO!



If you are getting ready to swap your address for a new one, be sure Business Week (that's me) comes along. I start out from Albany, N. Y. every week and I can trail you to your new spot just as easy as I've been making the old one. And I'll like it, too.
All you have to do is give me orders . . . like this:

Circulation Dept., Business Week, 330 W. 42nd St., New York City

Please change my address

NAME.....

OLD ADDRESS.....

NEW ADDRESS.....



Bolt from U.A.W.?

M. E. S. A. hires a pair of organizers from C.I.O., and they say auto plant maintenance men will go along with them.

The militant Mechanics Educational Society of America, independent union led by scrappy Matthew Smith (BW—Aug. 22 '42, p. 78), moved right into United Automobile Workers Union preserves last week when it hired as organizers two men who had been president and secretary of the Maintenance Workers Council of the Congress of Industrial Organizations' U.A.W. And the two, George Pilkiewicz and David J. Craig, declared they would take the 30,000-odd maintenance men of Detroit factories along into M.E.S.A.

• **NWLB's Action**—Not long after Pilkiewicz and Craig moved their offices, the National War Labor Board announced that a panel in Washington had denied a \$1.50-a-day pay raise sought by the maintenance men, offering in lieu of that blanket demand only a 6¢ advance to machinists, machine repair men, millwrights, and skilled electricians in the plants of General Motors, Chrysler, and Ford.

Craig pointed to that decision as a typical reason prompting his switch. "If the international had pushed our case harder," he said, "things would have been different."

• **Background**—Originally the skilled men in the auto factories were unaffiliated or were members of one or another of the American Federation of Labor craft unions. Then C.I.O. and its Auto Workers Union came along, favoring vertical organization in shops, and the maintenance men were for the most part absorbed in blanket contracts.

Some, however, battled the issue, feeling little kinship with the production workers. Presumably these groups will be the ones most attracted by the M.E.S.A. drive. In only a few of the shops do A.F.L. unions hold bargaining rights alongside U.A.W.-C.I.O. contracts for the bulk of the employees.

• **Swift Action**—M.E.S.A. moved swiftly to lend emphasis to its move by chartering on Monday a local in a Briggs plant in Detroit that is now under U.A.W. contract. This action followed a meeting of the Maintenance Workers Council's 50 members, which turned into a somewhat stormy debate.

M.E.S.A.'s Smith attended, as did Vice President Walter Reuther of U.A.W.-C.I.O. and other higher-ups of the international.

The council listened to arguments from both sides, then tabled without action two motions by the Pilkiewicz-Craig team, one asking for a vote of

THIS IS WORTH FIGHTING FOR



The right to govern ourselves

BRAVE AND DETERMINED Americans left bloody footprints in the snow at Valley Forge, to give us the priceless right to run our country as the majority of us think it should be run.

Today, equally resolute and courageous Americans are fighting to preserve that hard-won heritage—for themselves and for their children. They know that in the Axis nations people are mere puppets bowing to the brutal whims of fanatical dictators.

That's why Americans are fighting. And, as they fight on to certain Victory, they are inspired by an unshakable determination that this government shall continue to be "of the people, by the people, and for the people."

The Southern Railway System, because of its strategic location, is playing a tremendously vital role in the transportation of war materials and fighting men. But it is doing more than that. It is also helping to keep the wheels of our national life rolling in defense of the home front. It is grimly but willingly taking on burden after burden—because it's a rich privilege to serve the nation in times like these.

When private automobile travel began to be curtailed by tire and gasoline rationing—the kind of travel that normally accounts for more than four-fifths of all inter-city travel—the railroads took on the thankless job of providing substitute transportation. That meant more trains, more cars per train, more locomotives,

crowded stations, and a thousand headaches! But the job is being done—on top of the major task of handling hundreds of thousands of Uncle Sam's soldiers, sailors and marines.

When the oil shortage developed in the eastern states, the railroads said that they could move 200,000 barrels a day to meet the emergency. They are now moving more than 800,000 barrels a day. In the first eight months of this year, the Southern Railway System handled more than 19,000,000 barrels of oil to the North and East.

These are simply examples of how one railroad is doing its bit to protect our way of life; our heritage of freedom; our right to govern ourselves.

From this experience, a better Southern Railway System will emerge—more efficient and more useful to the people it serves than ever before—because, even during these trying times, we are taking advantage of every opportunity to improve our services, facilities and methods; every opportunity to plan for a better tomorrow when Americans will continue to hold their heads high as free men, proud in the knowledge that their children, too, will enjoy the blessings inherent in a nation of self-governing people.

That is worth fighting for!

Ernest E. Harris

President.

SOUTHERN RAILWAY SYSTEM

THE SOUTHERN SERVES THE SOUTH

CLEVELAND

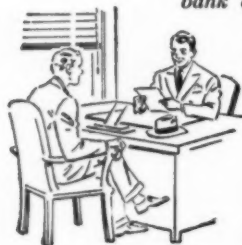
For prompt
handling
of banking
transactions
and financing to

expedite war production in Northern



Ohio, you are
invited to consult
Cleveland's oldest
bank.

Our specialized
experience in
commercial banking,
and our financial
resources today, as in past wars, are
at the disposal of our country. A



bank officer in close
contact with
Cleveland
industry
will be glad
to assist you.

**THE
NATIONAL CITY BANK
OF CLEVELAND**



**EUCLID AT EAST SIXTH
TERMINAL TOWER BLDG.**

**MEMBER FEDERAL DEPOSIT
INSURANCE CORPORATION**

confidence, the other calling for the council's withdrawal from U.A.W.-C.I.O. and affiliation with M.E.S.A.

LOGGERS' LABOR BOARD

The Pacific Coast Lumber Commission, set up by the National War Labor Board early this month to handle labor disputes in lumber mills and logging camps of the Northwest, is tackling first the job of standardizing wages for the 100,000 workmen in the industry. Last week in Seattle, the five-man board listened to union's ideas of what the wage scale should be; this week in Portland employers presented their briefs.

The commission will have jurisdiction over 17 major disputes now pending between employers and unions (the C.I.O. International Woodworkers of America and the A.F.L. Northwestern Council of Lumber & Sawmill Workers).

Headed by Ben H. Kizer, Spokane, as chairman, the commission includes (for employers) Dean Ballard of the Seattle Chamber of Commerce and E. B. MacNaughton, president of the First National Bank, Portland; (for labor) James Landye, Portland union attorney, and William Geurts, director of Farm Security Administration camps. Commissioners go on NWLB's payroll.

PENNSYLVANIA PAY BOOST

Like pennies from heaven was the extra money 45,000 Pennsylvania payrollers found in their current pay envelopes. In awarding a 15% increase to all employees earning up to \$3,200 a year, Gov. Arthur H. James embraced the Little Steel cost-of-living formula evolved by the National War Labor Board as the measuring stick for government salaries.

For eleven days, 800 state liquor store clerks had picketed and kept closed some 250 of the monopoly system's retail and wholesale outlets, in support of demands by their C.I.O. union for a 20% increase. The liquor clerks got a flat 15%. Other payrollers get 15% over their Jan. 1, 1941, rates, in accordance with the Little Steel formula.

PHONE HELPS FILL JOBS

Parker Appliance Co., Cleveland, added a tag line to its want ad appeal for male and female help recently: "If you can't come in, phone." Not only did applications jump 100%, but the company also discovered and hired many qualified individuals who had hesitated to make the rounds of factories. Conversely, phone replies also headed off a number of unqualified applicants.

Personnel interviewers assigned to phone duty were instructed to make a quick check of qualifications and advise the caller whether it would be worth while, from his or her standpoint, to appear in person.

FINANCE

On Renegotiation

Congress accepts most
War Department's amendments
on review of contracts, thus easing
some business jitters.

After all the hubbub about contract renegotiation, the matter was quiet settled last week—for the time being, at least—when Congress, in conjunction with the new tax legislation, plentifully amended the old renegotiation law. ● **Common-Sense Governs**—By a large, the congressional rewrite is a faithful echo of what Undersecretary War Patterson had advocated before Senate finance subcommittee as a balm for war contractors' jitters (BW Oct. 10'42, p27). The new law, in short, legalizes common-sense elasticity, which had not been permissible (or only dimly so) as things stood before.

Those Patterson requests that were granted include:

Authorization of final agreement whereby a contractor may be given a guarantee that a renegotiated batch of contracts won't be pried into a second time (except on a showing of fraud).

A new statute of limitations, prohibiting commencement of renegotiation later than one year after the close of the fiscal year within which the contract was completed or terminated.

Permission for the contractor to furnish financial data with war procurement agencies, following which his profits are either cleared or renegotiated. If the contractor doesn't hear from the arm forces within a year, he is automatically cleared. (The purpose of this high technical provision is to take care of contractors whose contracts require years in completion, and who want to find out where they stand on an annual basis.)

Legalization of over-all renegotiation—that is, reviewing multiple contracts in a lump.

Leeway for eliminating excessive profits by reductions in contract price.

Provisions for tax offsets, whereby the contractor who refunds the government any money can recoup the taxes he paid on the now-lost profits.

Exemption of "target" contracts and certain other types of agreements from renegotiation at the option of the arm forces.

One major revision of Patterson's suggestions was made, however. Some contracts were redefined to cover anything having to do with the completion of a contract except "the product of a mine, oil or gas well, or other mine"

natural deposit, or timber, which has been processed, refined, or treated and the first form or state suitable for industrial use."

Administrative Fog—This provision make the extractive industries happy. Under the old law the armed forces claimed that lumber contracts, mining contracts, and similar agreements were subject to renegotiation. After a lot of argument, the situation was so foggy that nobody knew where it was.

Now it's definitely established that the extractive field is outside the pale of renegotiation so long as the products have not past the first stage of production. The gain to the extractive industry is this: They will be able to compensate for depletion of assets without fuss. The procurement agencies had been inclined to frown on such charges before.

Two other facets of the amended law, included in Patterson's suggestions, are: (1) the Treasury hereafter may renegotiate contracts under its wings, and (2) Patterson's idea of a \$250,000 floor is lowered to \$100,000. Thus a contractor whose annual volume of war contracts is less than \$100,000 is immune to renegotiation.

The Services and OPA—Meantime a somewhat vaguely reported division of authority between the armed forces and OPA has resolved itself to this:

(1) Goods which OPA has exempted from General Maximum Price Regulation may be sold to the armed forces without regard to OPA regulation. Goods not exempted must stay at or below their ceilings. But the mere fact that they were sold in accordance with OPA's edicts does not prevent the goods from being renegotiated.

(2) In the extractive industries, OPA ceilings and the excess profits tax are the only safeguard against out-of-control profits.

ARMOUR'S V LOAN

Government guaranteed loans brought banks another big slice of war business this week when Armour & Co. of Chicago announced that it had arranged a three-year revolving credit of \$50,000,000. Although it doesn't approach General Motors' recent \$1,000,000,000 in size, the Armour loan cuts quite a figure in the meat packing industry. The terms of the agreement closely resemble the G. M. arrangement (BW-24'42,p102). Armour will pay 2 1/2% interest on anything it borrows and a commitment fee on the unused amount. The government guarantees 75% of the loan. A group of 20 banks led by Continental Illinois National Bank & Trust Co., Chicago, will advance the money and carry 10% of the

like other loans negotiated under



Good news & money from home!

The thirteenth century saw the start of the great universities in France, Italy, Spain and England. The great University of Paris, started in 1200, was the first; and shortly began to send letters and manuscripts to the other universities. The University messengers were protected by royal decree, entitled to food and housing wherever they stopped. In time, their functions included the escort of students, and the carrying of funds from parents, which made the messengers popular with the students.

The University messengers later served the Court, and became the first public postal service of France. For almost five hundred years, through all the varied reigns, wars, conquests and revolutions, the University of Paris maintained its postal service, secured most of

its revenues from it, subsequently paid the state for the privilege.

Communication is indispensable to civilization. The postal service we take for granted was hundreds of years in arriving at its present efficiency, convenience and security. Our own U. S. Post Office system is today the world's best.

The demands of war, the shortage of men, trains and planes, add to the Post Office's responsibilities and difficulties. So help your Post Office help you. Mail early and often; tie your letters, faced up; watch train schedules.

Today all our facilities are employed in war work. But as the originators of Metered Mail, and the largest producers of Postage Meters in the world, all our experience in expediting mail is at your service. Call any of our offices.



Pitney-Bowes POSTAGE METER CO.

Branches in principal cities. Cf. phone directory.

In Canada: Canadian Postage Meters, Ltd.

1449 Pacific St., Stamford, Conn.



See war-time power plant
practice demonstrated

1942 POWER SHOW

See war-time power plant practice demonstrated in graphic, instructive exhibits by leading, progressive manufacturers eager to serve you now. Are you studying problems such as how to make present equipment produce more or last longer? There is no surer, easier, quicker way to find the solution of this and many other vital power problems than by attending the 1942 Power Show. Never before has it been so necessary to attend a Power Show. Here is the opportunity to perfect your knowledge so that you can better meet your war-time responsibilities. Be sure to attend—and to bring your associates.

See how.. hear how.. learn how.. at the

**15th NATIONAL
POWER SHOW**
NATIONAL EXPOSITION OF POWER & MECHANICAL ENGINEERING
NOV. 30-DEC. 4, 1942
MADISON SQUARE GARDEN, N. Y.
Managed by International Exposition Co.

Direct
Fast
Thorough
Economical
EFFECTIVE!

A terse summary of the service rendered by BUSINESS WEEK's "clues" non-display advertising in bringing Employment, Business or Equipment Opportunities—offered or wanted—to the attention of the Active-Management—Men of American business. Copy November 2d for the November 7th issue.

RATE: 50 cents per word or \$2.50 per line (or fraction) per insertion, payable in advance. Minimum charge \$5.00. Discount 10% on orders for insertion in 4 consecutive issues. Publication box number address counts as 2 words; replies forwarded without charge.

Representatives Wanted

Aircraft Engineering firm with personnel of sound reputation desires representation of several established mid-western or eastern concerns for presentation and sale of their products to aircraft and aircraft instrument manufacturers located in the Eastern area.

If interested,
address communications to

General Aircraft Products, Inc.
420 Lexington Avenue
New York City, N. Y.

THE MARKETS

Bond dealers still argue heatedly about the Treasury's \$4,000,000,000 financing early this month and the market's frosty reaction to it (BW—Oct. 24 '42, p104). A few still think Secretary Morgenthau tried to sell a gold brick and got caught, but most dealers now agree that the Treasury knew what it was doing. Morgenthau, they think, has put government financing on a take-it-because-I-say-so basis, and for the time being, the market will do as it's told.

● **Market Confused**—Several shrewd dealers even believe that the 2% bond issue would have been oversubscribed as usual if the Treasury hadn't adopted a new rule on allotments. Under the old system, all subscribers who put in for more than \$25,000 got the same share. This time the secretary announced that all subscriptions except those from banks would get a 100% allotment. After other orders had been filled, the banks would share what was left.

Both banks and dealers want the Treasury to work off as much as it can on private investors, and most of them are enthusiastic about the new allotment system. But the sudden change in rules seems to have balled up the customary subscriptions process, which may help explain why the Treasury had to use some quiet persuasion to put the issue over.

● **How Banks Subscribed**—Ordinarily a cagey bond man, close to the market, can guess to within a point or so what the allotment on a government issue will be. Knowing this he simply pads his subscription so that his allotment will figure out to the amount he wants. In the first trial of the new system, even old-timers couldn't be sure how the allotment would run. As a result, banks held off during the first day the books

were open, waiting to see how the issue was going. When it showed signs of lagging, they decided to figure on a 100% allotment and put in for exactly what they wanted instead of blowing up their subscriptions. The issue was fully subscribed—rumors say by \$400,000,000 to \$1,000,000,000—and Morgenthau had to do some frantic eleventh-hour salesmanship.

In spite of this explanation, it's pretty obvious that banks didn't like the 2% bond Morgenthau shoved at them. It's also obvious that the government bond market has been tightening up steadily as the volume of outstanding securities increased. Recently the market has required a lot of support from the Federal Reserve banks, and from now on it will probably need a lot more.

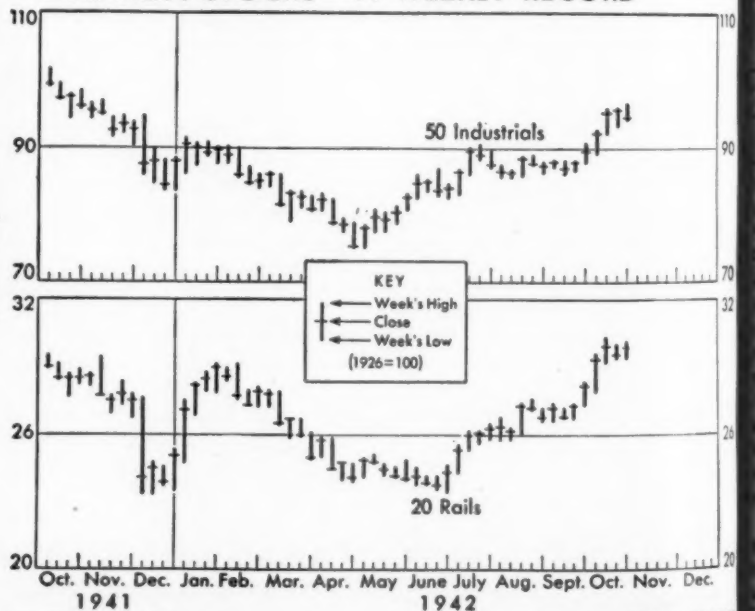
● **Reserves Created**—In the week ended Oct. 21, the twelve central banks set an all-time record for security buying. In the one week they added \$415,000,000 worth of governments to their portfolios, most of it in bonds and notes. Purpose was both to support the market and ease the tight reserve position of member banks.

Security Price Averages

	This Week	Week Ago	Month Ago	Year Ago
Stocks				
Industrial ...	94.5	95.8	89.7	96.1
Railroad	29.9	29.6	28.2	28.5
Utility	34.8	34.2	31.2	41.0
Bonds				
Industrial ...	111.6	111.2	110.3	105.3
Railroad	88.4	87.7	87.2	85.3
Utility	107.1	107.4	106.6	107.4
U. S. Govt. .	110.0	110.0	110.0	112.8

Data: Standard & Poor's Corp. except for government bonds which are from the Federal Reserve Bank of New York.

COMMON STOCKS — A WEEKLY RECORD



Data: Standard & Poor's Corp.

© BUSINESS WEEK

Regulation V (BW—Sep. 19'42, p98), the credit is intended to provide working capital. Meat packers expect to buy unusually big supplies of live stock in the coming season, and without extra funds Armour might run into trouble on its inventory financing.

Auto Rates Cut

Casualty bureau members again reduce premiums on bodily injury coverage; action follows slash by St. Louis company.

Just a month ago casualty underwriters tried to head off trouble by scaling down automobile liability rates in gas-rationed states (BW—Oct. 3'42, p80). The companies hoped a cut of 20% for holders of A ration books would be enough to satisfy policy owners and meet competition, but it didn't work out that way. After three weeks' painful experience, members of the National Bureau of Casualty and Surety Underwriters shook up their whole rate structure and came out with a new system which they intend to use until the end of the war.

Result of St. Louis Cut?—The National Bureau explains that it changed its plans because official announcements from Washington finally made it plain that limitations on driving will last for the rest of the war. Insurance men point out, however, that the new rate structure undercuts rates of the American Automobile Insurance Co. of St. Louis, an independent, which has been giving the big companies a lot of trouble lately.

When the National Bureau announced its 20% cut on Sept. 28, American Auto refused to string along. Instead it announced an even larger cut and applied it to the whole country, not just to the eastern rationed states. Some of the big underwriters accuse American Auto of kicking over the apple cart and forcing casualty insurance to work on an impractical basis. But, in spite of their grumbling, they are ready to cut their rates to meet the competition.

New Cut Runs About 30%—In its new system, the National Bureau throws out the idea of allowing a percentage reduction and replaces it with a completely revised scheme of classification. Amount of reduction in rates will vary according to previous rating of the policyholders and their status under gas rationing. In most cases it will come to at least 30%.

Until now, casualty underwriters have used a private automobile classification scheme based on number of drivers using car and estimated annual mileage. Class B (cars used for business purposes)



At Auction

VALUABLE INDUSTRIAL PROPERTIES

250,000 square feet at Dover, N. J.
90,000 square feet at Wharton, N. J.
to the highest bidders

SATURDAY, NOVEMBER 14th, 1942

DOVER PROPERTIES AT 12 NOON. 4-story and basement brick and reinforced concrete and brick slow burning steel frame industrial buildings. Boilers, steam heat, elevators, sprinklered. Also brick garage and 5 building lots.

WHARTON PROPERTIES AT 2 P. M. Group of 3 industrial buildings. 1- and 2-story brick and reinforced concrete, steel sash and brick slow burning construction, sprinklered. Boiler house with equipment. Frame warehouse. 13-acre pond.

Sale by order of GOTHAM HOSIERY CO., Owners
of Unused "Onyx" Properties

Write for Descriptive Illustrated Book Map

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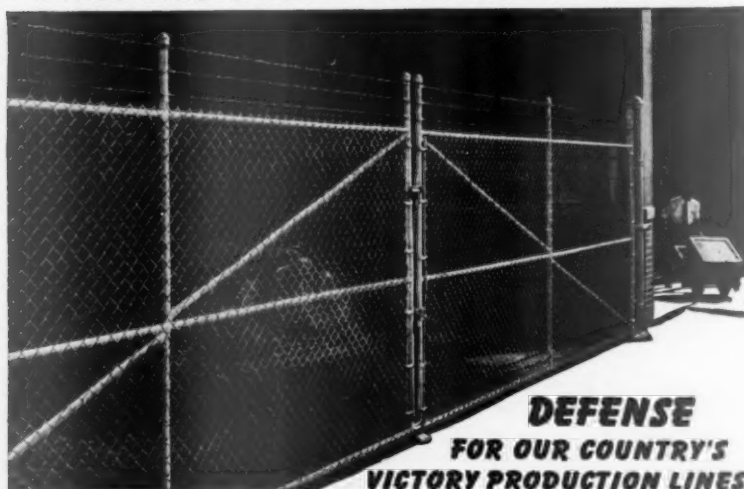
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DEFENSE
FOR OUR COUNTRY'S
VICTORY PRODUCTION LINES

• Waste is an enemy against which America must be safeguarded, and loss of production time or vital materials due to careless or malicious trespassing is dangerous waste. • Now, more than ever before, industrial properties need the protection of Page Fence, the modern chain link barrier made by the company which was founded by the originator of woven wire fence in 1883. • Distribution, construction engineering and erection of Page Fence are handled by local, responsible firms which are factory trained and long experienced—more than 100 independent firms which own their plants and hold membership in PAGE FENCE ASSOCIATION, Headquarters: Monessen, Pennsylvania.

VICTORY FIRST
At the Page mills, men, machines and materials are on an all-out schedule for production of fence to protect plants working on Government orders

See ACCO advertisement in this issue, page 42

PRODUCT OF PAGE STEEL & WIRE DIVISION—AMERICAN CHAIN & CABLE COMPANY, INC., BRIDGEPORT, CONN.

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BUSINESS WEEK ADVERTISING SALES OFFICES

ATLANTA
1011 Rhodes-Haverty Bldg.
BOSTON
1427 Stetler Bldg.
CHICAGO
520 No. Michigan Ave.

CLEVELAND
1510 Hanna Bldg.
DETROIT
2-144 General Motors Bldg.
LOS ANGELES
405 W. 5th Street
NEW YORK
330 W. 42nd St.

PHILADELPHIA
16 So. Broad St.
SAN FRANCISCO
48 Post St.
ST. LOUIS
Paul Brown Bldg.

was taken as the base rate. Class A was allowed a 20% reduction in the base rate, and Class A-1 got 25% off.

● **New Base Rate Adopted**—In calculating their new rates, the companies have abolished this classification scheme, assuming that all private cars now fall in the A-1 class. In addition they have cut the rate by a flat 10%, which puts the new base rate for all liability policies 35% under the old one.

Bodily injury rates will vary according to the policyholder's gas allotment. Car owners with only an A book get an extra 20% off their premiums; holders of B books get 10%, while C books pay the full base rate. These additional cuts apply only to bodily injury, and, except in Illinois, property damage insurance will pay the full base rate regardless of what gas allotment the policyholder gets. Illinois authorities held out for a graduated scale of P. D. rates.

● **Safe Driver Plan Dropped**—In addition, casualty companies have decided to drop the much-criticized safe driver reward plan. Adopted in 1938 in spite of bitter protests from agents, this system paid a cash rebate at the end of each year to drivers who had completed the period without an accident. From now on, companies will allow everyone in states recognizing the safe driver plan a cash discount of 10% at the beginning of the year instead of refunding 15% to drivers who got through without a smash.

Working on this formula, casualty companies are getting out new rate schedules. As before, rates will vary from district to district, but reductions will apply to the whole country regardless of when nation-wide gas rationing goes into effect. In rate-regulated states, the companies will have to go into a huddle with authorities on revisions.

● **Effective Dates**—Revised rates went into effect in unregulated states Oct. 20. In the gas-rationed area, underwriters will rebate a proportionate part of the premium on any policy written after July 22, the date rationing started. Elsewhere they will rebate on policies written after Sept. 1.

In spite of these concessions, underwriters haven't yet succeeded in pacifying all their agents and policyholders. Biggest sore spot is the refusal to rebate on policies written before the deadline. Owners insist that when their automobiles are garaged for lack of gas, they should get a reduction no matter when the policy was dated.

● **New York Dodges Issue**—In New York, brokers appealed to the state rating bureau to put pressure on the underwriters. Superintendent Louis H. Pink sympathized but declined to force the companies to change their minds. In several other states, authorities are hearing the same sort of complaint, but so far none have demanded additional rebates.

THE TRADING POST

More Advertising in Uniform

Yet another example of advertising by a business house in behalf of a public service is the copy that recently appeared over the signature of the two Hartford Insurance Companies to tell property owners of the War Damage insurance protection now open to them.

War Damage Insurance is a government service rendered by the War Damage Corporation, a federal agency. The insurance companies are agents for the corporation and cooperate in writing its policies. Like every other useful commodity and service, however, war damage insurance must be sold. So the Hartford Companies have applied some of their advertising space to help the government bring this service to the knowledge of property owners.

Here is just one more war chore that advertising can handle to perfection.

For Better Training

One of the important, although less heralded, activities of the War Manpower Commission is the Job Instructor Training that is carried on in industrial centers by its local staffs.

Too often it is assumed that a mechanic's ability to perform a certain operation carries with it the ability to train others in doing it. But those who have had to expand their working forces ten or twenty fold to meet war needs now know from bitter experience that that isn't so.

With the hot breath of war production schedules on the back of our necks we can't follow peacetime methods of training. Suddenly a machine operator finds that he must train six or ten or twenty novices in his particular skill. And what has been as plain to him as the nose on his face when he does it himself suddenly becomes as obscure as a wart under his chin when he tries to teach someone else.

He never has heard that there is a technique of teaching that he needs in his new capacity just as badly as he needs the technique of his regular production job.

Through the Job Instructor Training course the mechanic is taught how to teach others—how to break down his job into easily mastered fragments, how to show the new man the purpose and method of each piece, how to lead him to asking the right questions to clear his blind spots, how to put him at ease and stimulate him to tackle his new work with confidence. These are a few. With the help of such training the competent mechanic learns how to multiply his own productivity by im-

parting his proficiency to others in the plant.

Many plants have dealt successfully through this instruction with problems that involve more efficient planning and performance, greater shop safety, quality standards, and personnel morale and turnover. As a war measure it should justify itself. But the enduring values that will remain with a plant in which skilled mechanics are required to take this new slant at their jobs should be evident.

To Make Ends Meet

"One prolific source of our production problems," said an aircraft manufacturing executive to me the other day, "is the fact that back in Washington one lot of men sets our production schedules for planes, while another lot allocates the materials to build them. Sometimes I wish the two groups were on speaking terms with each other."

Policy and Technics

On a wall in the office of J. H. Kindelberger, president of North American Aviation Inc., appears the following statement: "It may not always be the best policy to adopt the course that is best technically, but those responsible for policy can never form a right judgment without knowledge of what is right technically."

Kindelberger got it from Kettering of General Motors. Whether it originated with him or had a more remote source I don't know. But I do know that it lays on the line a truth that too often is ignored by Americans.

It is a national failing to be over-impressed by the policy maker—the "big shot," if you please—and to look down on the technician. Sometimes we go so far as to admire especially the executive who affects to put the technical man in his place by belittling technical considerations as "mere matters of detail."

I suspect that during recent years there has been a trend away from this naive adoration of the inspired big shot. Certainly our war-bred dependence on the technicians in a score of fields must go far to convince us that, after all, an industrial economy, in peace or war, can do no better than its technology. Executive intuition has had to give way to technical proficiency.

Somehow I feel that both our war and postwar problems are going to underline anew the importance of sound technology. Then it will become more and more evident that sound judgments on policy can be made only in the full light of sound technical judgment. W.C.

WANTED TO PURCHASE a going concern

One of our clients wishes to acquire by outright purchase a manufacturing company of medium size. While consideration will be given to any attractive property, a plant producing precision equipment, requiring some engineering talent, and utilizing machine shop and foundry facilities would be the most appropriate. It makes no difference whether the products manufactured are industrial or consumer goods. The post-war possibilities are more important than present volume of business. Reply by *letter only* in strict confidence and include sufficient detailed information to permit a preliminary appraisal.

Address—"Advertiser" c/o

G. M. BASFORD COMPANY
INDUSTRIAL MARKETING AND ADVERTISING
60 EAST 42nd STREET • NEW YORK, N. Y.



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RELIEVED ME OF DISTRACT-
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AETNA LIFE
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Hartford Conn.

THE TREND

PLANS ACROSS THE SEA

A news report in the last issue of *Business Week* (BW—Oct. 24 '42, p. 28) added the "Committee for Economic Development," headed by Paul Hoffman of Studebaker, to the list of groups now engaged in the important job of pooling ideas and data relevant to postwar planning. The last issue of the *Harvard Business Review* provided the members of such groups with highly relevant reading in an article entitled, "Postwar Boom or Collapse," which Professor Sumner H. Slichter of Harvard has built on a solid, if rocky, foundation of statistical estimates of postwar conditions.

Neither the kind of organization that Mr. Hoffman is doing nor the kind of educational job that Professor Slichter is stimulating can be left for "V-Day," and business men are well advised to consider such efforts to win the peace as integral parts of the task of winning the war.

• If we hadn't worn out the term "reconstruction," along with "recovery" during the depression, we might substitute that for this "postwar planning" which some super-patriots affect to find distracting in the midst of a war effort. That is the term that British business men use. They probably get into difficulty with critics who find the choice motivated by a desire to restore things just as they were, but certainly reconstruction of a normal civilian economy will be part of the job, even if we intend to hang the restored facade on a frame of new materials put together by new methods.

The 182 trade associations that bring all the chief industries of Great Britain into the Federation of British Industries have some interesting things to say on "reconstruction" in a report which they have submitted to their government. Certain of their observations will touch a responsive chord here. For instance, the almost plaintively repeated request for consultation of industry by government before national policy decisions are made—notably on any extension of existing government controls over industry beyond the immediate postwar period. For instance, the "submission" that excess profits taxes and contract price-shaving are depriving industry of financial resources needed for reconstruction of the nation's economic power after the war. For instance, the suggestion that the government settle down to a consistent policy toward industry and its trade associations—which might be translated into American as, "Make Thurman Arnold and the Department of Commerce work together."

• Unlike some of their American colleagues, the British industrialists are very sure that the government's power to ration, to direct foreign trade, to handle the expansion and contraction of industry must be continued for some years after the war. They are also fairly certain that the government must engage in an extensive public works program during the transition period "when the

immediate postwar activity is slackening and before the world has really got going again." And, with a skeptical bow to Cordell Hull, they seem very certain that British postwar policy must include both long-familiar measures of tariff protection for home manufactures and many of the more recently discovered devices for controlling foreign trade by preferences, quotas.

• F.B.I.'s conclusions on this last point may seem a startling reply to what its report refers to as "statements by members of the U. S. A. government and responsible leaders of industrial thought" which "envisage a postwar world in which 'trade barriers,' exchange controls, directive systems of imports and exports, discriminatory agreements to facilitate trade between countries should be swept away. . . . In other words, every country should be free to export to whatever destination it wishes, and to any extent, and should be prepared to receive any imports sent to it."

But whatever we make of this—including the exaggeration of America's farewell to tariffs—we can, at least, be grateful to the Federation reporters for the bluntness with which they approach a plea for understanding by Americans. We must remember that they see a postwar world in which Britain's position contrasts with that of the United States at almost every point. They foresee a Britain become a debtor nation, requiring—of an increasingly industrialized world—heavy imports of food and raw materials for which it can pay only through the shrewdest juggling of export deals; a nation with a shrinking population of rising average age; an economy faced by problems of contracting the industries expanded by war, relocating factories, and repairing destruction. On that view, there is more pertinence than impertinence to the statement, plainly addressed to American postwar planners, that, for Britain, "this problem of financing our exports is not a matter of economic theory but one of life and death."

• American postwar planners should be willing to extend that understanding of the differences in the circumstances and necessities of the two countries for which the F.B.I. report pleads. They can respond wholeheartedly to the admonition that the two governments should maintain close touch "on the basis that the problem at issue is not to consider how we can each protect our own interests but how we jointly, and incidentally the rest of the world, can struggle—." But on the rest of the sentence quoted they will place a question. It reads, "out of the slough of despond in which we are likely to find ourselves." The question will be, "Can't a more imaginative job of postwar planning keep us both out of that slough?"

The Editors of Business Week

Business Week • October 31, 1942

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